

Municipal Journal

And Engineer

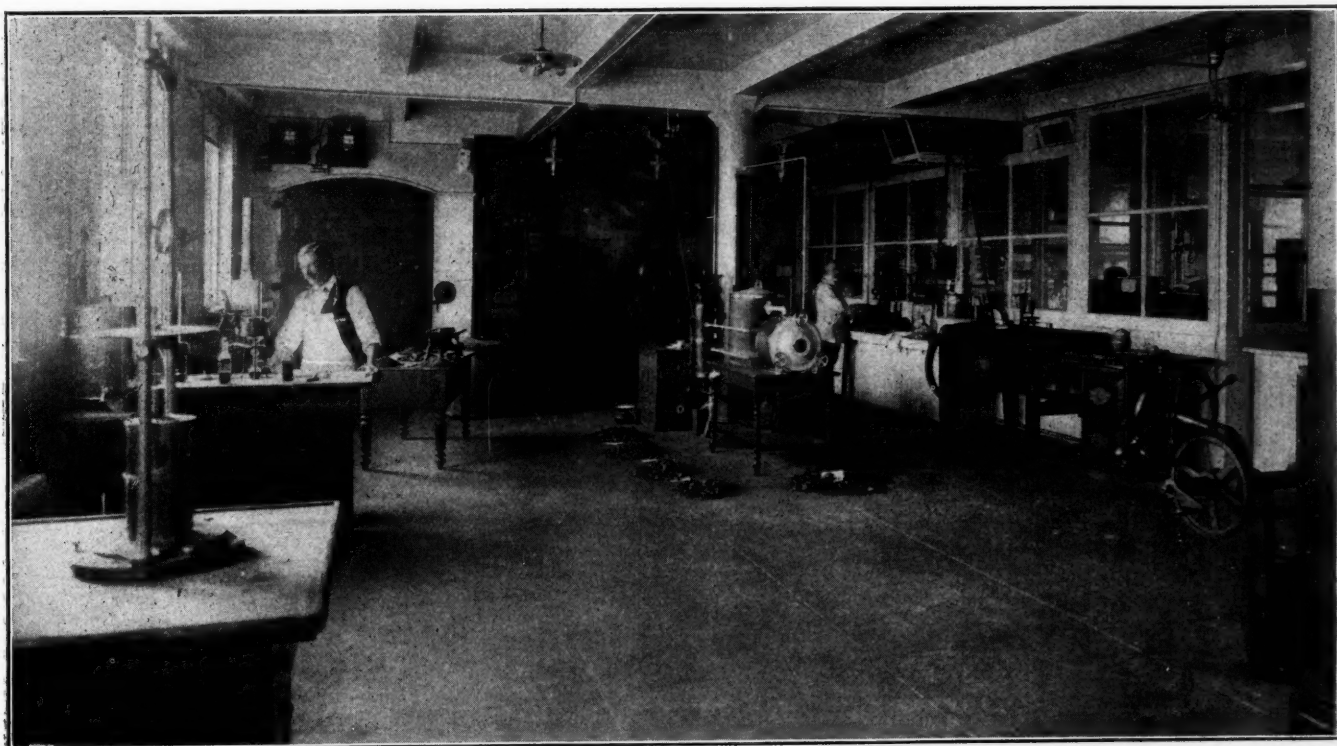
VOLUME XXVIII.

NEW YORK, JANUARY 12, 1910.

No. 2

MILLIONS SAVED BY INSPECTION

New York's Division of Inspection — Over a Thousand Excessive Charges a Year — Half a Million Saved in Coal Alone — Crooked Ways for Favoring Contractors — Standardizing Specifications



PHYSICAL LABORATORY FOR TESTING MUNICIPAL SUPPLIES

THE City of New York, through its various departments, expends upwards of \$15,000,000 per annum in the purchase of supplies, which are obtained through more than seventy purchasing agents, and are delivered at 1,300 receiving points. It is at once seen to be a very difficult matter to properly supervise these purchases; and it is evident that, even though the heads of the departments might have the best of intentions, the city could easily be mulcted in very large sums through overcharges, furnishing of inferior goods, etc.

A short time ago we described the method employed in Cleveland of having a central purchasing department through which all supplies are obtained. For a large city there would seem to be no better method for securing supervision over

these thousand and one petty purchases, which, however, mount up into the millions. Unfortunately, such a department cannot be established in New York, as the charter of the city states that "Each head of a department and each President of a Borough has cognizance and control of the purchase of fuel, furniture, utensils, books and other articles needed for the public offices within his Department or jurisdiction." As might be expected, some departments establish fairly good systems of making purchases, while others have practically no system. The Comptroller fortunately is able to exert some check upon dishonesty, or carelessness, however, through his power to refuse to honor for payment accounts which are in any way irregular.

In exerting this power Comptroller Metz established, about a year ago, a Division of Inspection, through which all purchases are carefully investigated before the payment of bills. It would seem to be better to have a department to initiate the purchase rather than to come in at the end of the transaction; but, as just explained, this was impossible. This Division has installed a modern Catalogue Bureau containing price indexes, trade journals, etc., in charge of an expert to whom all inspectors submit non-contract claims and invoices to learn whether prices charged are reasonable and just.

With this facility for checking up prices, the Division investigates all bills of claims against the city for general supplies furnished and for work performed which are not within the scope of engineering propositions; the number of these being about 110,000 per year. A corps of inspectors is maintained which now numbers thirty, and through these and through a clerical force of seven, the Division endeavors to ascertain *whether each transaction is genuine in every feature and whether the city receives full value for all money spent.* This work is assisted by a new system of book-keeping and accounting devised by the Committee on Revision of the Department of Finance, under which the departments now issue orders for supplies and forward a copy of each to the Division of Inspection. Following is the form of order for supplies:

COPY OF ORDER

ADVICE TO THE DIVISION OF
INSPECTION, DEPARTMENT
OF FINANCE
DEPT. WATER SUPPLY, GAS AND
ELECTRICITY
Ordered From A. P. Smith Mfg. Co.,
Newark, N. J.
Who will furnish and deliver the follow-
ing directly to Western District Repair
Yard, 98 No. Portland Ave., Brooklyn.

No. 134.....
Date, Jan. 29, 1909.....
Open Market Purchase.....
Requisition No. 4884.....

This Memorandum is to be Retained as a Permanent File by the Division of Inspection, Dept. of Finance.
When the goods herein ordered have been inspected, the particulars of the inspection are to be noted on the extended sheet on the right.

Line No.	Quantity	Unit	Description	Bid Price Per Unit	Amount or Estimate	Ad-justed Amount
	1		By-pass elbow for A. P. Smith 12-inch high pressure gate, for.....		\$12 50	
	1		Yoke and wedge complete with intermediate nut for same, for.....		8 75	

This copy of order is to be sent to the Division of Inspection, Department of Finance, on the day the order is issued to the vendor.

During former administrations the work of investigation was begun only when the claim was filed for payment, or months after the order had been filled. As a result inspection was sometimes impossible and it was a general rule that examination of department records was considered a sufficient investigation of claims. Now, however, actual inspection of supplies, work and material is required of all inspectors, and no payments are made for these on claims which are not certified to by the inspectors.

TYPE OF INSPECTOR'S REPORT OF SUPPLIES

Dept. Finance—Div. of Inspection.

District No.....Order No.....Claimant.....
Department.....Borough.....

1417 Supplies furnished on.....
Receiving Point.....Location.....Supplies to be Inspected.....
.....
.....

Contract Certificate.
I certify that the supplies herein mentioned were duly received in the quantity indicated, and that the quality is in accordance with the terms of the contract.
Date.....Inspector.....

"Open Order" Certificate.
I certify that the supplies herein mentioned were duly received in the quantity indicated, and that the quality is in accordance with specifications.
Date.....Inspector.....

N. B.—Inspectors must list all details and return this report without delay.

As the services of the Catalogue Bureau are available to all the inspectors, there is no excuse for any to err in allowing ex-

cessive charges and all are held strictly accountable in this regard. The value of this Catalogue Bureau is also recognized and the data used by auditors, engineers and various other officials of the Department of Finance.

One of the necessary features of proper inspection is ability to inspect the goods immediately upon their receipt; and in order to be informed of their arrival, the receiver of supplies at each of the receiving points mails, immediately upon the arrival of the goods, a printed postal card describing the goods received. Each delivery is accompanied by an invoice, a copy of which is forwarded to the Division of Inspection. Thus the goods have ordinarily been passed upon long before the receipt of the bill of the same.

Where supplies are delivered on contract, the inspector must determine whether the supplies are in accordance with the specifications or the sample submitted; and where there has been non-compliance, payment is deferred until satisfaction has been secured. In both cases, contract and non-contract, he must assure himself that the quantity billed has been delivered.

Formerly each inspector had charge of a certain branch of commodities, but on the establishment of the Division of Inspection this was changed, and the city was divided into eighteen inspection districts, with one or more inspectors detailed to each district. Moreover, inspectors are from time to time ordered to exchange districts. This is believed to give each inspector varied practice, make him largely self dependent and also make it easy to temporarily fill vacancies.

The district system is in a manner self checking on the work of individual inspectors. For instance, a firm supplying goods to one district ordinarily supplies similar goods to other districts also. If these supplies are reported inferior in certain districts and not in others, it gives rise to suspicion that inspection in the latter may not be all that it should be.

Where technical information may be required, the matter is referred to inspectors who have the desired special knowledge. Where a certain class of supplies requiring such special knowledge are purchased in large quantities, it becomes worth while to make special provision for scientific inspection. For this purpose a laboratory has been equipped in which there are two rooms, one for chemical and the other for physical tests. To this are submitted such supplies as coal, cement, oils, paints, drugs, foods, fire hose, etc. These are carefully inspected and tested to determine their compliance or otherwise with the specifications.

Among other effective work done by the chemical laboratory is the preparation of disinfectants and vermin destroyers, which are purchased by the city by the ton or thousands of gallons. It was found that there was a profit ranging from 100 to 1,000 per cent on these, and the Department of Public Charities decided to manufacture all disinfectant and vermin destroyers which would be required by the various departments. Little yet has been done in this direction, since this action was not determined upon until October 29th last. Provision, however, is being made for carrying on this manufacture and the amounts required are being ascertained. For instance, the Department of Correction has asked to be supplied with 1200 gallons of exterminator and 900 gallons of disinfectant for the present year.

That the tests made by the laboratories, and the complaints to those furnishing supplies based upon such tests, have borne good results is shown by the fact that the coal, for instance, which the city has received recently is 25 per cent superior to that delivered heretofore. As the city purchases more than one-half million tons of coal a year at a cost of about \$2,400,000, the saving in this item alone is over one-half million dollars a year. A great deal of forage also is purchased by the city, and it is now known that the quality of much of this has been quite inferior. Now samples of each delivery are tested and many have to be rejected, much of the more expensive grains being found to contain large percentages of cheaper grains, and poor hay and straw being found in many cases.

The most excessive charges have been found in the smaller items, which, however, foot up to enormous sums. For instance, tin dippers which can be bought at retail for 5 cts. apiece were billed at \$3.00 a dozen. Surveyor's stakes were charged for at 15 cts. each. Four bolts were charged \$8.00 which were valued at only \$2.00. A 3-inch spiral tube cleaner was charged at \$3.00 which was worth only 65 cts.; and garden hose worth 10 cts. a foot was billed at 18 cts. Altogether, during this year more than 1,000 claims were found to contain excessive charges. When an inspector reports excessive charge, the claimant is notified to make the necessary deductions, and in nearly all cases he assents.

One great obstacle which the Division has to contend with is inadequate description of work and supplies in the bills rendered, thereby making imposition possible.

The moral effect of the activities of the Division of Inspection is already apparent. Continuous and individual attention given to all transactions has perceptibly lessened imposition. The auditor in charge of the Division, Mr. W. M. Hoge, states that even greater efficiency could be obtained with a few additions to his force and power. Additional office room and 20 more men are desired. As, in making investigations, it is often found necessary to examine witnesses, the power to administer an oath should, he thinks, be given to the auditor and to his assistant.

One significant illustration which distinguishes this department from many others of the city is the fact that a report dated December and giving information brought up to the first of that month, was printed ready for distribution by January 3d. Many of the New York city reports are 18 to 24 months old before reaching the hands of the public, while few are less than from nine to twelve months.

The efficiency of the Division and the effectiveness of its operations are due to the earnest work of the Auditor in charge, Mr. W. M. Hoge, who has had to contend against the

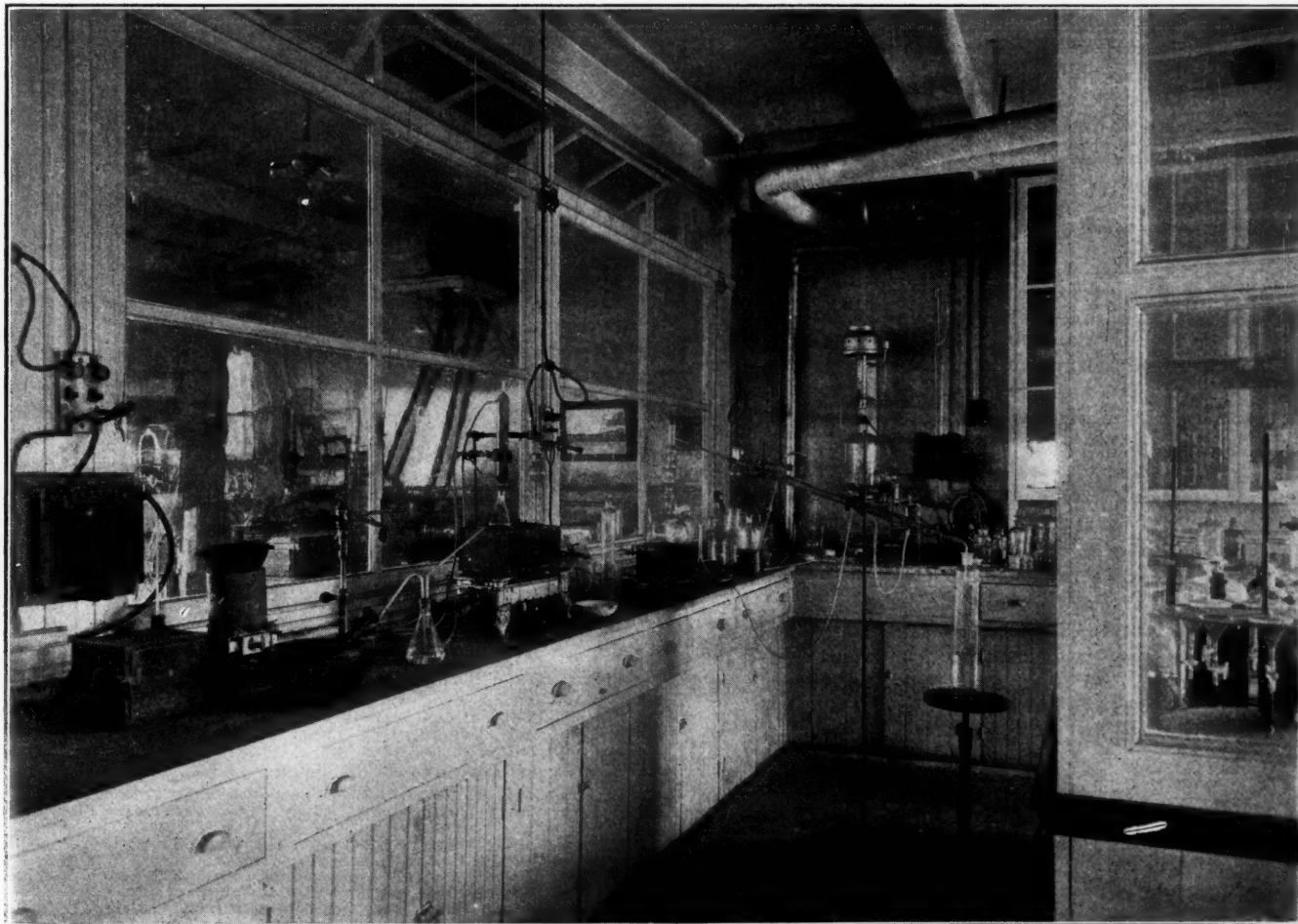
unpopularity of the Division with careless and unmethodical officials, and the enmity of grafters and of those middlemen who were bleeding the city by extravagant charges.

The report of the Division above referred to also discusses two or three special features which seem to them worthy of attention. One of these is the use of water meters for measuring water delivered to city buildings; another is the duplicate bid system, and a third is the standardizing of specifications used by the various departments.

METERING PUBLIC WATER CONSUMPTION

We do not entirely agree with the opinions of the Comptroller and the Division of Inspection on the matter of water meters. The report calls attention to the fact that there are about 1,300 points where from one to four meters may be placed in order that the city may measure its own water used on its own premises. "The main purpose of a meter is to measure penalties—thereby to stop waste—but why and in what manner the city should penalize itself is not clear. When steps were taken to check this illogical outlay, it was found that about 500 meters had already been installed." As an illustration, one bath house was supplied with five meters. Many are connected with new public schools, the number running from one to six per school. Mention is made of the fact that many of these are never read and some are so covered as to be inaccessible.

That a department which is spending large sums of money to reduce waste as well as careless purchasing by other departments should single out for its condemnation the water meter, the purpose of which is to reduce waste in the material furnished by the water department, seems somewhat remarkable. The purpose of the water meter is not to measure penalties except to stop waste. The object of stopping waste is to reduce the expenses of the water department and to postpone the time when additional sources of supply or additional storage reservoirs will be demanded. While there are penalties,



CHEMICAL LABORATORY, DIVISION OF INSPECTION, NEW YORK CITY

they are not for the advantage of the city treasury, but for the discouragement of waste. The main object of the meter is to show where the waste exists, and if such waste occurs on city property, it is just as important that it should be eliminated as though it were upon private property. As a matter of fact, the general experience of cities has been that more water is wasted by public schools and other city buildings than by any other class of consumers. It is quite possible that in many instances where three or four meters are used in one building one meter would be sufficient; but we maintain that one meter should be there in every case and should be read monthly or at least quarterly. We believe that each department should be charged with the water used by it; but if this is not done, it would seem possible to in some way bring pressure upon it to reduce the excessive waste which these meter readings would undoubtedly bring to light in a majority of cases.

There is no more absurdity in a city measuring its own supply of water, in our mind, than in its maintaining a large corps of inspectors to compel the several departments to be sure that they obtain what they pay for.

DUPLICATE BID SYSTEM

In almost every large city there can be little question that in one way or another certain contractors are favored by the officials of many of the departments. There are various ways of favoring contractors, and one of these as practiced in New York is believed to have been the secret opening of bids before the regular opening and the lowering of the figures of favorites below the lowest bid of any non-favorite. It is also believed that in other instances the figures of favored bidders are lowered during tabulation, many days often elapsing before the names of successful bidders are made known. Such manipulation constantly recurring has a tendency to discourage competition, thereby leaving favorites in full control to raise prices ultimately at will.

The Department of Finance has proposed a "Duplicate Bid System," in which each bidder would deposit his sealed original bid (as now) in the Commissioner's box, and in addition at the same time deposit an exact duplicate of this bid, sealed, in another receptacle known as the Comptroller's box, the two boxes being side by side. When all bids have been received, the comptroller's box would be taken to the Department of Finance and its contents tabulated. According to the present practice the tabulation of the original bids must be forwarded in due time to the same department, and under the duplicate bid system these bids would be compared with those originally deposited in the Comptroller's box. This, it is believed, would make impossible the practice above referred to.

It is also suggested that all departments, before placing "open market orders," be compelled to secure quotations from three firms and award each order to the lowest quoter thereon.

Another method of favoring certain bidders is that known as "class bidding." In this, bids are received on a list of a number of articles and compared by their totals. The theory is that these articles will all be of a kind naturally handled by one firm, such as stationery or hardware. As a matter of fact, however, instances have been found where typewriters have been listed with pipe fittings. Because of such absurd listings competition on the part of manufacturers and first handlers is discouraged, thereby leaving a free field to irresponsible middle men. It also renders collusion possible, since a favored bidder may be informed that certain items will not be called for and can consequently submit extremely low bids on these, thus bringing his total below those of honest bidders.

STANDARDIZING SPECIFICATIONS

Last July the Board of Estimate and Apportionment adopted a resolution requesting the Borough Presidents and several departments to designate officials to act as members of a Board of Conference Committee, for the purpose of standardizing the supplies furnished to the various departments and the prices paid therefore. On October 29th this committee was reduced to the Comptroller, the President of the Board of Aldermen and a representative of the Mayor, to consider first the specifications for fuel and forage. This committee has already re-

ported upon the specifications for coal, and these were adopted Dec. 22, 1909. Should the incoming administration continue the present policy in this regard, this committee will next take up the matter of specifications for forage, and following that those for oil.

It seems self evident that the city as a whole would profit by adopting standard specifications for coal and receiving bids on such specifications for all the departments combined, thus obtaining the low rates which purchase in such enormous quantities should obtain. At the present time there is not very much difference between the coal specifications of the several departments except in the greater completeness in some cases than in others. For instance, the Department of Docks and Ferries, which uses coal on ferry boats as well as for buildings, has absolutely no specifications. The Department of Water Supply, Gas and Electricity also has none, except the size of the coal. Among the differences in specifications it may be noted that the Department of Education requires broken coal to contain not more than 12 per cent of ash, whereas the other departments specify 16 as a minimum. In the case of buckwheat coal, one department gives 16 per cent ash as a minimum, a second 17 per cent and a third 18 per cent. In general, however, the specifications agree quite completely among themselves. Only two of the departments, however, include the contained heat units as a part of the specifications, and in this regard all of the other specifications should be modified. The specifications adopted by the committee above referred to state on this point as follows:

The bidder shall state a price per ton for furnishing and delivering all the coal called for in any class of the contract, and submit at the same time a standard analysis characterizing the coal as he intends to deliver it. The contracts will be awarded on the basis of comparison of the number of British Thermal Units, commercial, net for one cent, as appearing from the standard analysis submitted by the bidder and computed by the following method. Multiply the number of British Thermal Units commercial (i. e., as delivered) by 2,240 and divide this product by the contract price per ton (expressed as cents) plus one-half the per cent. of ash; the quotient is the British Thermal Units net for one cent.

This value will be the basis for comparison and acceptance of bids and award of contract, the award to be made to the bidder whose sample shows the greatest number of British Thermal Units net for one cent.

The specifications further provide that the contractor include with the price bid the percentage of ash in dry coal, the B. T. U. per pound of coal as delivered, and the price per gross ton "equal to — British Thermal Units, net, for one cent. When the coal actually delivered under this contract analyzes or tests otherwise than the above, the price per ton to be paid shall be determined as follows: Multiply the net British Thermal Units for one cent of coal as delivered (i. e., Commercial) by the price per ton as above and divide this product by the net British Thermal Units for one cent of the standardized analyses as given above. The quotient is the price per ton to be paid for this particular cargo."

In cases where rejection is impracticable a certain penalty will be imposed on coal falling below the limit set in the specifications.

1. Anthracite coal shall be penalized for excess in ash by deducting for each per cent or part thereof of ash in dry coal in excess of the allowed limit, two per cent from the price per ton, determined according to paragraph P.

2. Soft coal shall be penalized:

a—for excess in ash by deducting for each per cent or part thereof of ash in dry coal in excess of the allowed limit, two per cent from the price per ton, determined according to paragraph P.

b—for deficiency in British Thermal Units by deducting for each 100 British Thermal Units below the allowed limit, two per cent from the price per ton, determined according to paragraph P.

c—for excess in sulphur by deducting for each one-quarter of one per cent. of sulphur in excess of the allowed limit, two per cent from the price per ton, determined according to paragraph P.

d—for excess in volatile matter by deducting for each one per cent of volatile matter in excess of the allowed limit, two per cent from the price per ton, determined according to paragraph P.

The several sizes of coal are defined as follows:

Broken Coal.—Not less than 95 per cent. shall pass through a screen having $\frac{1}{4}$ -inch square mesh and over a screen having $\frac{3}{4}$ -inch square mesh.

Egg Coal shall pass through a screen having 3-inch square mesh and over a screen having 2-inch square mesh.

Stove Coal shall pass through a screen having $2\frac{1}{2}$ -inch square mesh and over a screen having $1\frac{1}{4}$ -inch square mesh.

Chestnut Coal shall pass through a screen having $1\frac{1}{2}$ -inch square mesh and over a screen having $\frac{3}{4}$ -inch square mesh.

Pea Coal shall pass through a screen having $\frac{3}{4}$ -inch square mesh and over a screen having $\frac{1}{2}$ -inch square mesh.

Buckwheat No. 1 Coal shall pass through a screen having $\frac{1}{4}$ -inch square mesh and over a screen having $\frac{1}{4}$ -inch square mesh.
Buckwheat No. 2 Coal shall pass through a screen having $\frac{1}{4}$ -inch square mesh and over a screen having $\frac{3}{16}$ -inch square mesh.
Buckwheat No. 3 Coal shall pass through a screen having $\frac{3}{16}$ -inch square mesh and over a screen with $\frac{3}{32}$ -inch square mesh.

A variation of 10% either way is allowable from these sizes.

All coal is to be weighed when delivered at the place of delivery by the engineer. A preliminary sample of each cargo may be taken promptly upon delivery of the cargo, and an analysis made of the same to determine whether it falls within the limits of quality allowed. If not, the cargo may be rejected, and in case of rejection must be promptly removed by the contractor and coal which does so conform furnished and delivered in place thereof.

The gross samples of coal delivered will be taken at the point of delivery by the official representative of the department selected by the head of the department and the contractor or his representative may be present when the samples are taken. A gross sample of pea and smaller samples of anthracite is fixed at 200 pounds and of larger sizes of anthracite and soft coal at less than 500 pounds. These gross samples are to be turned over to the laboratory for testing. Barge or car lots will be sampled by taking a small quantity of coal from each load of the unloading apparatus and wagon lots by taking a small quantity from each wagon load. These samples are to be promptly analyzed as follows:

"(a) A preliminary sample shall be analyzed inside of 24 hours, as to ash for anthracite, and as to ash, sulphur and volatile matter for soft coals.

"(b) The final sample shall be analyzed within seven days, as usual by proximate analysis and by a calorimetric test in an

ANALYTICAL REPORT FORM ON COAL

Office No. Laboratory No.
LABORATORIES OF DEPARTMENT OF FINANCE
DIVISION OF INSPECTION
New York City. 19...

Hon. HERMAN A. METZ,
Comptroller

SIR: { Cannel,
Soft,
Concerning Sample of Coal, billed as { Anthracite, of... size,
Received from Department of...
Delivered at...
I have to report as follows: The specifications are complied with.

Size by Screens		% Found	Trade Allowances		Contract Requirements
Through	Over		Larger	Smaller	
4 in.	2 $\frac{1}{2}$ in.		Broken, 5%	20%	
2 $\frac{1}{2}$ "	2 "		Egg, 5%	20%	
2 "	1 $\frac{1}{2}$ "		Stove, 5%	20%	
1 $\frac{1}{2}$ "	1 "		Nut, 5%	{ 10% Pea 5% 1 Bk.	
1 "	1 "		Pea, 5%	{ 15% 1 Bk. 5% 2 "	
1 "			Buckwheat,		
1 "			Dust—None		

	Bone %	Slate %	
Broken,			1% Slate. 2% Bone.
Egg,			2% " 2% "
Stove,			4% " 3% "
Nut,			5% " 5% "
Pea,			10% " 0 "
Buckw't,			15% " 0 " in No. 1

Analysis		Bone, 40% Fixed Carbon Slate, Less " "
Water,		
Volatile Matter,		
Fixed Carbon,		
Ash,		
British Thermal Units,		

Chemist, Department of Finance.

approved standard calorimeter operated by a recognized authority on fuel analysis."

In case a test is not satisfactory to the contractor, provision is made for having another analysis made in a laboratory of recognized authority on fuel analysis, to be agreed upon by the contractor and the city. The percentage of moisture as shown by the original analysis, however, shall be final and conclusive. If the result of the special analysis by the non-municipal laboratory agree within two per cent with the test made by the city upon the same sample, the contractor will pay the cost of the second analysis; but if there is an excess over 2 per cent, the city will pay for the second analysis. The payment for the coal will be based upon this special analysis.

TIME SHEETS FOR CITY EMPLOYEES

For keeping track of work done by New York City employees a plan has been adopted of having each fill out blanks. When his time is chargeable to several accounts a daily report of each individual is used, giving in detail the nature of the duties which he has performed during the day, with the hours devoted to each; also his time of arrival at the office and of departure therefrom. Another form is a ten-day report, which will be filled in daily by the employees and submitted to the head of the office or division only on the 10th, 20th and last day of each month, and which do not subdivide the time of the employee, but simply give the total time at the office each day, to be used when employees are engaged continuously on work chargeable to the same expense account. Still another form is used for gangs of laborers to be signed by the foreman only, who fills in the time for each of the men in his gang, forwarding such a report each day to the main office. The first form is considered especially useful where employees are engaged in field service of any kind, the daily receipt of these enabling the chief to keep continuous track of the work and the location of the men.

From these cards the pay roll clerk takes each man's time, and they are used by the clerk who keeps the cost records, where such are kept.

Although recommended by the Department of Finance and adopted by the Board of Estimate and Apportionment last year, the cards have just been distributed for use. They will not be used by the Police, Fire and Educational Departments, and probably others will adopt special forms, among them being the Street Cleaning Department.

Reports must be submitted to the head of division on the 10th, 20th and last day of each month. 10-4131 5-10

SERVICE RECORD OF

TITLE OF POSITION OR CIVIL SERVICE TITLE

RESIDENCE

DEPARTMENT

DIVISION OR OFFICE

YEAR	TIME		HOURS		ON DUTY	ABSENT	DESCRIPTION OF WORK (If space here is insufficient, use other side of this card)	EXPENSE CLASSIFICATION (To be filled in by person who reported)
	A. M.	P. M.	ON DUTY	ABSENT				
MONTH	1	2	3	4	5	6		
	7	8	9	10	11	12		
DAY OF MONTH	1	2	3	4	5	6		
	7	8	9	10	11	12		
TOTAL OF SHEET								
FIRST OF MO. TO DATE								
SIGNED JAN. 1910								

DESIGNED AS TO REQUIREMENT OF SIGNATURE AND APPROVED FOR RECORDS

HEREBY CERTIFY THAT THE FOREGOING RECORD OF SERVICES PERFORMED BY ME IS CORRECT

Page 2

DAILY TIME REPORT

I hereby certify that the following record of services performed by me this day is correct:

Name

Title of Position or Civil Service Title

Date

A. M.		P. M.		HOURS ON DUTY		HOURS ABSENT	
Arrived	Departed	Arrived	Departed	Assigned	Not Assigned	Excess	Not Excess
DESCRIPTION AND LOCATION OF WORK				CHARGEABLE TO HOURS AMOUNT			

FOR FURTHER PARTICULARS SEE REVERSE SIDE

Department

Bureau or Division

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Examined and Approved

STREET CROSSINGS AND DRIVEWAYS

Private Driveways Across Sidewalks—Alley Crossings—Good Standard Construction in Two Cities—Street Crossings of Various Kinds

WHILE convenience of street traffic calls for as uninterrupted a roadway pavement as possible, convenience of foot passengers demands that the sidewalks should have as few obstructions or breaks in the uniform smooth surface as it is possible to obtain by careful construction. Foot passengers, of course, can more readily step up or down a height of six or eight inches than the average vehicle can rise or fall suddenly through the same distance without injury. But the fact that pedestrians can thus overcome such obstacles should not be taken advantage of except when absolutely necessary.

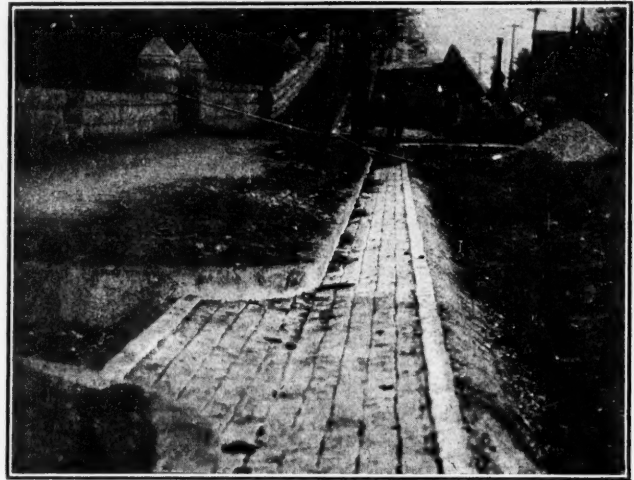
The most common imposition on pedestrians found in a number of cities is the private driveway which is carried across the sidewalk on a gradual slope from the gutter level. This requires little less effort to cross than would a narrow street; and considering the relatively infrequent use to which such driveways are put, this is inconveniencing the many for the benefit of the few. Such construction should not be permitted generally in any city; but such crossing, in the line of the sidewalk paving, should be flush with it and be connected with the gutter by a steep incline. In the few cases where such a construction would prove too steep an obstruction for heavy loads, it would be better to carry the curb and sidewalk intact past the driveway and bridge the gutter, as by planks supported by short iron beams with one end resting upon the curb and the other upon the roadway surface.

There will be some cases in which the large amount of traffic in the street will make such a bridge objectionable, and the loads using the driveway will be so heavy as to make the steep approach impracticable; and in such cases the driveway may need to be lowered below the sidewalk level. But such should be considered as special cases and require special permits for their construction. A good construction of private driveway is shown in the illustrations, the plan showing the standard construction at Chattanooga and the photograph a similar driveway in Memphis.

In the case of alley crossings the same construction may be



PRIVATE DRIVEWAY ACROSS SIDEWALK, MEMPHIS



ALLEY CROSSING AND BRICK GUTTER, CHATTANOOGA

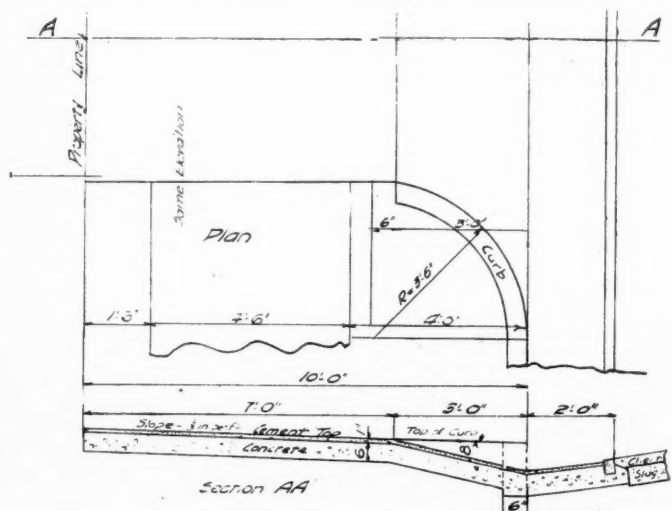
employed, but many cities lower the pavement similar to a street crossing, although the drop is usually not quite so great. On the principle of the greatest good to the greatest number, such a compromise between convenience to teams and convenience to foot passengers would seem to be permissible. The



STREET CROSSING STONES, CLAY STREET

plan of such construction in Chattanooga is shown, in which the drop below the sidewalk level is about $2\frac{1}{2}$ inches. (In the photograph of this crossing the roadway pavement has not been constructed in either street or alley, but the gutter is shown on its concrete foundation.)

In the case of street crossings, the relative convenience of pedestrians and vehicles gives rise to different constructions in different locations and in different cities. In our issue of January 5th was illustrated a construction in which the sidewalk was carried across intersecting streets without any break in surface, but such construction is not adapted to business streets,



PRIVATE DRIVEWAY ACROSS SIDEWALK, CHATTANOOGA



STREET CROSSING STONES, RUBBLE STREET

since the obstruction formed at the corner requires a wide detour of teams in turning from one street into another and thus greatly restricts the available roadway. Where impervious pavements are used also, such construction does not seem advisable, as the extensive level surface will not drain readily toward the catch basins and in addition would probably contain depressions where puddles of water and mud would form—water which in dirt or even macadam streets would be rapidly absorbed.

In streets with permanent impervious surfaces, therefore, the standard construction is to carry the gutter to the intersection of the curb lines, requiring the foot-passenger to step down from the sidewalk to the gutter in crossing the street. There are, however, a number of exceptions to this. For instance, the gutter may be bridged, in the line of the sidewalk, with iron, stone, concrete or wooden bridges three or four feet wide. In some cities the roadway pavement is warped at this point so as to give a drop of only an inch or two at the curb in the line of the sidewalk, an inlet being provided just beyond such crosswalk on each of the intersecting streets. This, however, does not afford sufficient protection to the sidewalk at the corner against teams taking a short cut and mounting the low curb. However, where streets carry little traffic this construction has its advantages.

Whatever the form of construction such materials should be used along the street crossing as will, so far as possible, furnish a dry and clean footway for pedestrians. In the case of hard

permanent pavements no special provision is made, since the entire pavement should meet this description. In the case of dirt or macadam roads, however, it is generally found desirable to construct crossings of some material which will withstand the blows of vehicles. Granite or other equally tough stone is in most common use for this purpose, but a good grade of concrete has been employed by a number of cities and proved quite satisfactory. The principal objection to such construction occurs in the case of dirt streets when they are converted to mud, under which condition vehicles strike the crossing stones when resting on a bottom several inches below their level, thus doing damage to both wheels and crossing. This objection is sometimes met by making the crossing of small cobblestone, which is given a considerable crowning transversely of the crossing (or lengthwise of the street), the outside edges of the crossing being several inches beneath the finished surface of the roadway. In this case wheels, even when sink-

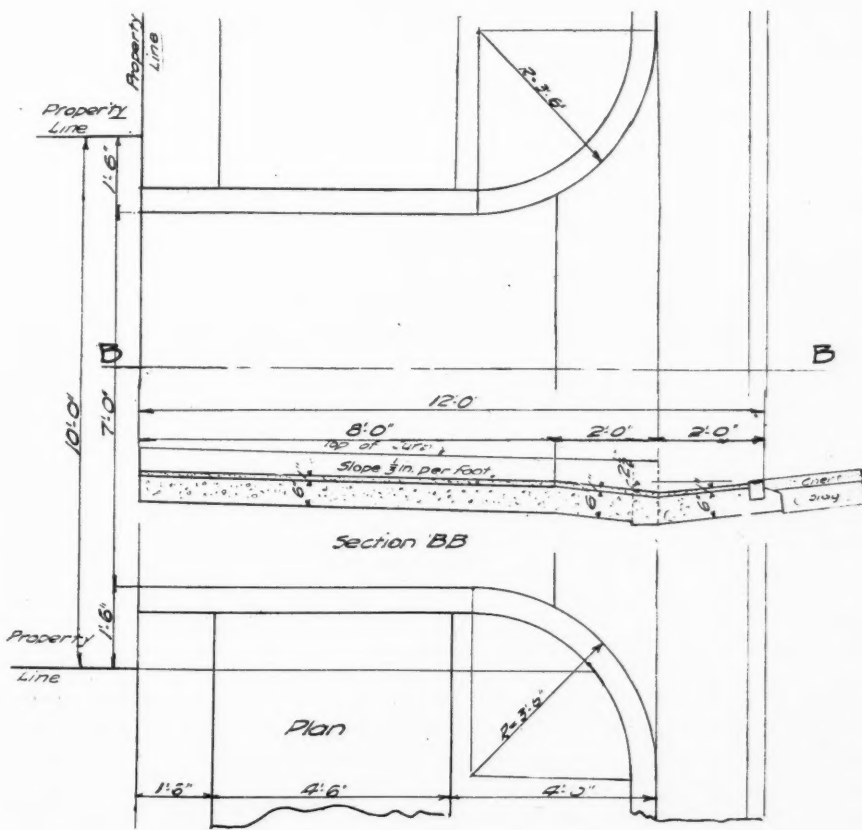


CURB STREET CROSSING

ing several inches in the mud, will rise up over the crossing without any considerable jar.

Another method of meeting the same difficulty is quite common in the red clay districts of the southern Atlantic States, and consists of a series of stepping stones, similar in shape to pieces of curbing about two feet long, set deeply into the dirt with their greatest dimension parallel to the axis of the street and with intervals of about $2\frac{1}{2}$ feet between them. In times of deep mud vehicles can pass such a crossing without rising over it, the wheels passing between the stones. To the stranger the crossing of a street on these stepping stones is quite a feat, even in dry weather, and savors of an adventure when the mud is deep. As a matter of fact, the stones are little used when the road is sufficiently dry to permit of using it instead. So common are these crossings in certain sections, however, that we have seen these stepping stone crossings used on rubble and other hard surface streets where a flat-stone crossing would have been much more desirable and no more expensive, or the crossing might even have been omitted altogether.

A kind of crossing which goes to the uncommon extreme of regarding more the convenience of the pedestrian than that of the vehicle, but of which we have seen only a few examples, is constructed, where the roadway is of dirt only, by carrying two unbroken lines of curbing across the street along the outside lines of the crossing, and filling between these with cobblestones or other hard surface. The crossing with its containing lines of curbing is carried level with the sidewalk and the gutter between the two bridged with stone, so that the crossing is a comparatively convenient one. It is only with the greatest care, however, that teams can cross it without inconvenience to the passengers or even damage to the wheels.



ALLEY CONSTRUCTION ACROSS SIDEWALK

CAUSES OF TYPHOID IN WASHINGTON

INVESTIGATION conducted for more than three years past by Messrs. M. J. Rosenau, Director of the Hygienic Laboratory; L. L. Lumsden, Past Assistant Surgeon, and Jos. H. Kastle, Chief of the Division of Chemistry, all of the Public Health and Marine Hospital Service, have resulted in a report by them as to the probable causes of the typhoid fever in Washington. Between May 1st and November 1st they made personal visits to every case of typhoid reported, examined the water of the Potomac River, both before and after filtration, and made other investigations, among these a study of the problem in a selected district comprising 32 city blocks and containing 5300 persons. The relation of flies to Washington's typhoid cases was looked into carefully, but little evidence of any connection between the two was discovered. Apparently about 50 per cent of the cases during 1907 and 1908 were definitely attributable to importation, contact with previous cases and to infection of milk, especially the two latter. The disease appeared especially prevalent among children, suggesting milk and contact as responsible for most of them. The majority of cases occurred among persons who lived in houses of good or fairly good sanitary condition. There was little difference in the prevalence of the disease between sewered and non-sewered districts. It was believed that about 10 per cent of the cases in 1906, 1907 and 1908 were definitely attributable to affected milk. Oysters and shell fish were believed to play very little part in transmitting the disease. There seems to be no reason for suspecting the river water except the general distribution of cases, and the analysis of the water gave only such results as to inspire confidence in it.

As a result the investigators believe that there is need of legal control of typhoid fever patients and typhoid bacillus carriers, and that a vigorous campaign should be conducted against typhoid fever as a contagious disease and that measures should be adopted that would prevent the spread of infection in milk.

This is the third report that has been made by the Public Health and Marine Hospital Service, and it is understood that further inquiries will be made by it as well as by the Health Department. As stated in these columns some weeks ago, Dr. J. J. Kinyoun has been appointed as Bacteriologist of the Health Department for the special study of typhoid fever.

For the second or third time during the past fall and winter, we believe, there were no deaths from typhoid in Washington during the week ending December 18, 1909, and a reduction of 14 cases under treatment; and during the week ending January 1, also, there were no deaths from this disease.

STANDARDIZING CITY ACCOUNTING

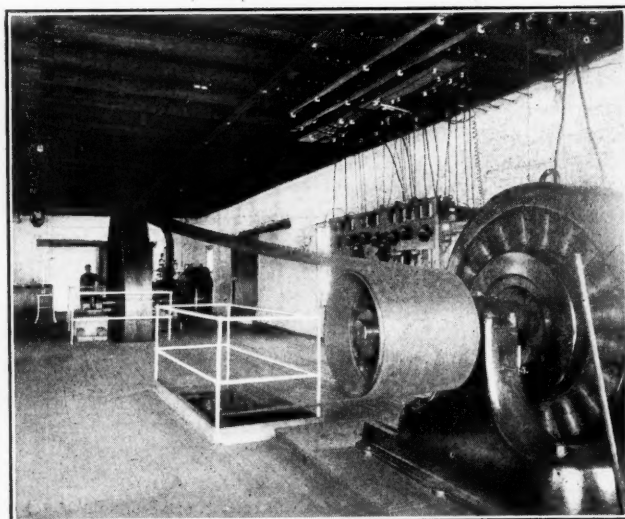
ON the recommendation of the Municipal Voters' League of St. Louis and of the Bureau of Municipal Research of New York, experts have been employed to examine and report upon the standardizing of the accounting system of St. Louis. An investigation is being conducted by a special committee of the House of Delegates and Council into the advisability of consolidating several City Hall departments, standardizing bookkeeping and office record methods, and the creation of a controlling board for extra employees. The voters' league wanted to look into the bookkeeping system and asked to be allowed to make such an investigation at their own expense, and the special committee consented to oversee the work and make it a part of its report to the Municipal Assembly. Henry Bruer, of the Bureau of Municipal Research in New York, was consulted and recommended experts. The investigation is not to be with a view to changing the present system of record keeping, but toward standardizing the systems now in use in the several departments so the same clerks can be transferred from one office to another to handle rush work and thus eliminate the necessity for each department to carry more clerks than are needed. The Board of Control will be a clearing house for extra employees, transferring all not absolutely needed for work on hand in each department, to other departments where they may be needed, and transferring them back or

somewhere else, when the rush work is done. It is claimed that \$100,000 can be saved by the process. The bookkeeping systems employed by the various departments have been commended by federal census bureau experts, but the several divisions of the city government are using records that vary too much for the interchange of clerks.

THOMASVILLE MUNICIPAL LIGHTING PLANT

THE electric light plant at Thomasville, Ga., was operated for a number of years by private parties. The service not being what it should be and the charge for street lighting being excessive, the city thought it could save money and have more and better lights by municipal operation.

The electric plant was purchased and the city began to operate it Jan. 1, 1906, and the pumping plant was consolidated with it the same year.



ENGINE AND DYNAMO, THOMASVILLE LIGHT PLANT

The lighting plant has been continuously improved, and with new equipment which has been ordered will consist of two generators, one of 250 kw. and one of 200 kw., belted to Corliss engines. One of the units, which is shown in the photograph, has been in operation for three years, and generates current at an expense for fuel of slightly above one cent per kw.-hour with coal at \$3.20 per ton. Steam for the combined plants is furnished by four return tubular boilers, 66 inches x 16 feet, rated at 100 horsepower each, and all equipped with shaking grates for hand firing.

The street lighting consists of 70 inclosed arc lamps of 1,200 candle-power and 50 tungsten lamps of 50 watts each. The commercial lighting consists of 10,000 lamps, all on the meter system.

The service has been as good as it is possible to obtain, as there has been no interruption in the commercial service for three years. The plant is operated at night only, except for a few months in the summer, when current is furnished for electric fans, but it is expected to operate a continuous service the coming year. The plants are operated on the eight-hour system, as the city finds this the most economical, it not being possible to get the desired results when working men 12 hours every day in the year.

The commercial rate is 10 cents per kw.-hour, and the income from this leaves a balance over operating expenses, besides saving the city about \$5,000 per year for street lighting.

The combined plants are in charge of a committee of three members of the City Council appointed by the Mayor, and the superintendents are elected by the City Council, all employees being hired on their merits.

The electric system is in charge of Mr. D. R. Pringle, a graduate of the Georgia School of Technology, to whose credit the success of this department is due.

MUNICIPAL JOURNAL AND ENGINEER

Published Every Wednesday by Swetland Publishing Company
THIRTY-NINTH STREET BUILDING
231-241 West Thirty-ninth Street, New York

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SUBSCRIPTION RATES

United States and possessions, Mexico, Cuba.....\$3.00 per year
All other countries..... 4.00 per year
Entered as second-class matter, January 3, 1906, at the Post Office at New York, N. Y., under the Act of Congress of March 3, 1879.

CHANGE OF ADDRESS

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Readers are invited to contribute to the MUNICIPAL JOURNAL AND ENGINEER, either in the form of special articles or of letters discussing matters of current interest.

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JANUARY 12, 1910

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Foresight Means Better Results

WE are glad to learn, by a letter just received from the City Engineer of a Virginia city, that he and his assistants 'are very busy preparing plans and specifications for our work for the coming year.' This is as it should be. The dull season in construction work should be the busy one in planning. Unfortunately, a considerable number of city engineers are not able to order their work according to this system, owing to the failure of those who decide what work is to be undertaken to do so sufficiently in advance; perhaps because they do not realize the time required to adequately study the problems and prepare the plans.

Probably every City Engineer is familiar with that provoking practice of Councils of delaying decision upon some important work for no apparent good reason; and then directing him to present, the following week, a report which should be based upon investigations requiring weeks or months for their proper making. Similar procedures too often require him to start actual construction on work before the details are thoroughly worked out.

This is all wrong. By the beginning of winter the engineer should know what work he must plan for executing the following year. Or, if a change of Councilmen at the beginning of the year makes this inadvisable, at least this matter should be taken up in earnest immediately after the first of January. And we believe it to be an important duty of the City Engineer to present forcibly to Councils the urgent advisability of early decision on work which requires investigation or planning.

Ample time for these purposes means—if the engineer is capable and faithful—that such careful consideration will be given to all details as will secure the most effective plans at the least cost. Haste must sometimes mean either a risk based on guesswork, or certainty secured by unnecessary and expensive conservatism. The wise engineer who is placed in the position of having to choose between risk or conservatism, will guard his reputation by adopting the latter, even though it be at the expense of the taxpayers, since their representatives placed him in the dilemma.

Examine Steel Overhead Bridges

WHILE it is well known to engineers that iron and steel bridges over railroad tracks are subject to serious corrosion from the gases contained in the smoke given off by engines passing beneath them, other non-technical officials such as Country Commissioners or Councilmen who have more or less charge over such structures are apt to be ignorant of or overlook this danger. Neglect or oversight of this is the more common because the corrosion takes place entirely beneath the floor, where it is not seen and where inspection is difficult, while the steel work above the floor may be in perfect condition.

An illustration is given by a report from the City Engineer, Robert Hooke, of Chattanooga, on a viaduct consisting of two 120-foot truss spans, in which he found a 7-inch channel bar stringer under the sidewalk with its web almost entirely destroyed, and found many other members which had lost through corrosion approximately $\frac{1}{8}$ of an inch on all surfaces, the bridge or viaduct being consequently condemned as dangerous for any kind of vehicles. Immediate steps were taken looking towards temporary strengthening and ultimate renewal of the bridge; and it would certainly appear as though this action was taken none too soon.

In structures of this kind prevention is certainly much safer, as well as cheaper, than cure. It can be secured by protecting the steel from the attack of the gases, either by entirely enclosing the structure below the floor with tight tongue and groove boards, all joints being made thoroughly tight; or better still by encasing each steel floor member in concrete. The concrete in this case adds no strength to the structure, but merely serves as a protective coating, it having been found that concrete is apparently not attacked by smoke or fumes from locomotives. For this reason, also, such a location would seem to be a particularly appropriate one for the use of reinforced concrete bridges in place of steel. There may, of course, be other conditions, such as excessive span, which would oppose the adoption of this form of construction; but other things being equal, it would seem to be desirable to use reinforced concrete construction, even at a slightly greater expense than the ordinary steel bridge.

The principal object of these few words, however, was to call attention to the necessity for careful and frequent inspection of steel bridges subject to locomotive gases, with a view to preventing deterioration of such structures and perhaps even serious accidents through their collapse.

CONCRETE BOUNDARY MONUMENTS

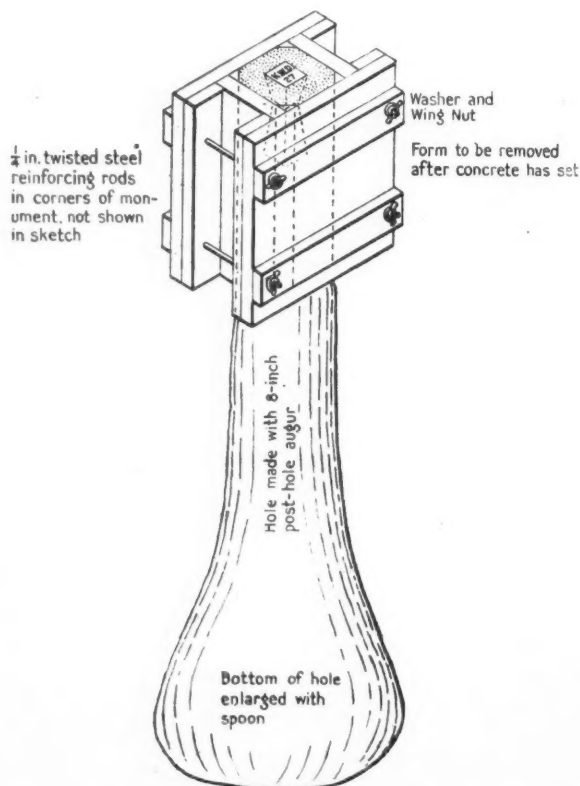
CONCRETE is now generally recognized as a cheap and eminently satisfactory substitute for granite for use as boundary monuments. The following details of construction and cost are therefore of interest. They are drawn from the report of Leonard Metcalf, civil engineer, of Boston, to Kennebec Water District, Waterville, Me., and relate to an exceptionally fine piece of work done under Mr. Metcalf's direction in connection with the China Lake water supply.

These bounds were built upon the ground in post holes 5 feet or more in depth and in forms, either flush with the ground in mowing fields and grass lands, or about one foot above the surface of the ground along fence and property lines. The bounds were of the following general form: Below the ground, 8 inches in diameter, 5 feet in depth, with the base flared out to from 4 to 6 inches greater diameter; above the surface of the ground, or at the top of the post, 6 inches square for a length of 6 or 16 inches, according as the bounds were built flush with or above the surface; in the four corners of the square top and extending to the bottom of the post were bedded bars of $\frac{1}{4}$ -inch steel bent in U form across the top of the post. In the top of the post was bedded a small iron casting with expanded bottom bearing the letters K. W. D. and the number of the bounds, as, for instance, K. W. D. 95. The concrete, of which these bounds were made, was mixed on the ground in the proportion of one part of Portland cement to two parts of sand to four parts of gravel or broken stone of approximately $\frac{1}{2}$ inch diameter. The cost of these bounds erected was considerably less than it would have been for granite bounds, and it is believed that they will prove even more satisfactory, since it seems probable that there will be less danger of heaving by frost. Time alone, however, can determine whether this is the fact.

The total cost of the bounds in final position averaged about \$4.30 each, including therein the cost of all materials, supplies and forms and all teaming, labor and supervision.

Cost of Monuments

	No. built.	Cost per Month.	Average.
September	52	\$211.85	\$4.07
October	36	160.25	4.45
November	15	65.25	4.35
Total.....	103	\$437.35	\$4.25



CONCRETE BOUNDARY MONUMENT FOR KENNEBEC WATER DISTRICT

This includes \$1 per day for 48 days for District horse, but does not include cost of forms, which amounted to between \$4 and \$5, making the total average cost per bound (in place) \$4.30.

TUNGSTEN STREET LAMPS

SERIES tungsten lamps rated at 250 watts each are now on the market, and central stations can save money by substituting them for many of the street arc lamps now in use. For the old direct-current arc of 1,200 nominal candlepower and 300 to 330 watts, and for the common, enclosed alternating-current arc of 400 watts, the 250-watt tungsten may be substituted, lamp for lamp, with good effect. If the open arc of 2,000 nominal candlepower, or the 7.5-ampere alternating enclosed arc is to be replaced, equal illumination may be obtained by the substitution of a somewhat greater number of the 250-watt tungsten lamps.

Compared with the 400-watt alternating arc, the 250-watt tungsten is fully equal in the matter of mean hemispherical candlepower, but lacks perhaps twenty per cent of intensity in directions thirty to forty degrees below the horizontal.

If the substitution is made lamp for lamp, the power required of the central station is reduced from 330 to 250 watts where the open arc of 1,200 nominal candle-power is displaced, and from 400 to 250 watts where the alternating arc is abandoned. This latter reduction of power amounts to thirty-seven per cent for series transformers, generators and engines. More than this, the higher power-factor with the tungsten lamps makes a further gain in the capacity of apparatus. Assuming that the constant-current transformers are about nine-tenths loaded in each instance, the power-factor should be about seventy per cent with the arcs, and about ninety per cent with the tungsten lamps. With these power-factors, the demand on the generators is 571 volt-amperes per 400-watt arc lamp, and 277 volt-amperes per 250-watt tungsten lamp, neglecting line and transformer losses. In other words, each tungsten lamp requires forty-eight per cent of the generator capacity necessary for a 400-watt alternating-current arc.

At the station no change is necessary in the equipment when 250-watt tungsten lamps are put up in place of the street arcs, except that a part of the capacity in arc dynamos, rectifiers or constant-current transformers will be no longer required. The 250-watt tungsten lamps are made to operate with 6.6 amperes, like the 400-watt alternating arc and the old open arc of 1,200 nominal candlepower, so that the required ampere capacity of apparatus and lines remains the same. With 6.6 amperes the 250-watt tungsten lamp requires thirty-eight volts at its terminals, so that the number of these lamps may be twenty per cent greater than the number of open arcs on a direct-current dynamo, and fully double the number of 400-watt arcs on a transformer, because of thin lower power-factor.

The list price of the 250-watt tungsten lamp is \$3.50 less discounts of ten and ten per cent in standard packages of one dozen each, giving a net price of \$2.84 per lamp. As the manufacturers put the life of the tungsten lamps at 1,200 to 1,500 hours of use, it is conservative to estimate the cost of renewals on the basis of 1,000 hours life, which requires four lamps for a lighting year of 4,000 hours. On this basis the annual cost of renewals per 250-watt tungsten lamp is \$11.36.

Against this cost of tungsten renewals should be set the annual expense of trimming and repairs on arc lamps, and a part of the expense of their inspection. Such costs must, of course, vary with wages, the location of lamps, and other local conditions, but the items of labor and supplies for trimming and repairs during 4,000 hours of lighting annually will be covered in many instances by \$17 for each open arc of 1,200 nominal candlepower, and \$7 for each 400-watt alternating arc. Where these figures apply, it appears that the renewal costs of the 250-watt tungsten lamp will exceed the trimming and repairs on the 400-watt alternating-current arc by about \$4.36 per year, and will be less than the trimming and repairs on an open arc of 1,200 nominal candlepower by \$10 yearly. *Electrical Review.*

NEWS OF THE MUNICIPALITIES

Current Subjects of General Interest, Under Consideration by City Councils and Department Heads—Streets, Water Works, Lighting and Sanitary Matters—Police and Fire Items—Government and Finance

ROADS AND PAVEMENTS

Paving Severely Tried

Baltimore, Md.—The season of snow and wet pavements has given a severe test to two styles of street surfacing, trial sections of which have been in use in Baltimore for the past few months. The Alcott sectional wood paving which was laid on the west side of Calvert street and the Alcott wood key paving on Pratt street are reported to have furnished more substantial footing for horses than any other forms of paving in the city, and there has been no record of accidents on the sections of streets where either of these two surfaces was in use.

Longest Good Road in the Country

Boston, Mass.—The State of Massachusetts will next year practically complete a State road from Cape Cod across the middle portion of the State to near Albany, N. Y. When the New York State road is completed from Albany to Niagara Falls, motorists will have from Cape Cod to Niagara Falls, a distance of about 700 miles, a State road which will be the finest and longest stretch of State road for automobiling in the United States.

Placing Street Signs in Dallas

Dallas, Tex.—More than 900 signs at the street intersections in Dallas have been put into place. The contractor has the specifications and directions from the City Engineer for about 175 more, and about 300 additional intersections are to be marked. Placing of a few signs awaits the action of the Board of Municipal Commissioners in designating the proper name for a disputed street.

Ice, but Not Snow, Prohibited on Sidewalks

Elizabeth, N. J.—The Board of Health has taken up the problem of clearing snow from sidewalks and is endeavoring to ascertain if the Board can exercise jurisdiction over property owners who fail to comply with the regulations in this respect. Section 22 of the Health Code prohibits the draining of water over a sidewalk in such a way that ice may be formed, but there is no reference to snow. Mayor Mravlag states that the city is in a position to clean all sidewalks and assess the cost against the property owners, but he explained that this procedure entails much trouble and an outlay which the city may be years in recovering.

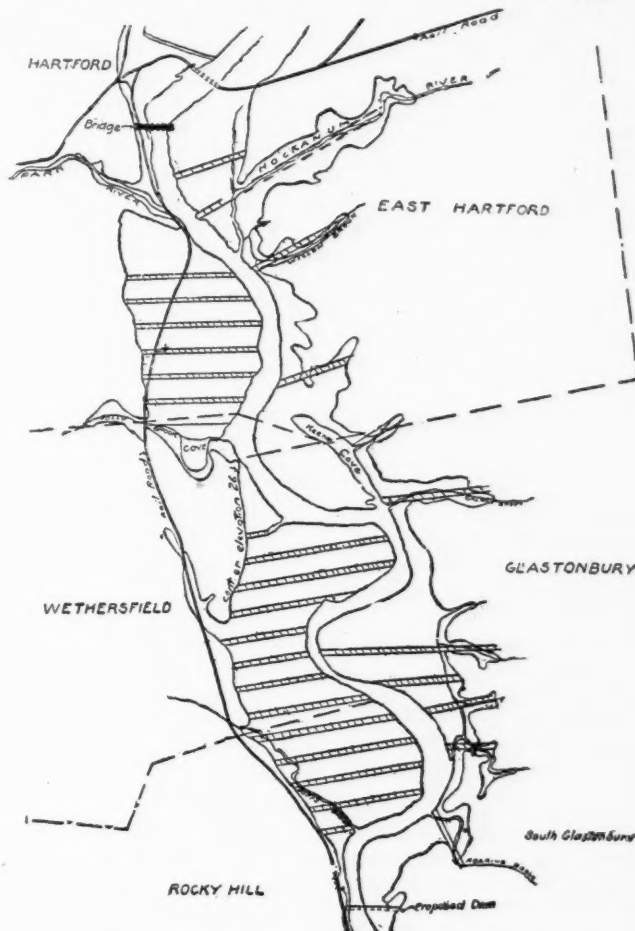
Virginia State Highway Work

Richmond, Va.—State Highway Commissioner P. St. Julien Wilson has published a road map of the State which shows in colors road building completed by State aid, work under construction, bridges built and surveys made. Twelve counties are tinted purple to show that they have voted bond issues for good roads since the establishment of the Highway Department in July, 1906. All the counties except ten have availed themselves of State aid, either in participation in cash appropriations or in the use of convict road forces. In 1906 and 1907 the appropriation amounted to \$25,000 for the use of the convict road force only. For 1908 this had been increased to \$85,000 for the convict forces. During the calendar year just ended a total of \$65,000 was available for the convict force and \$250,000 for money aid.

River Front Development and Boulevard

Hartford, Conn.—Park Superintendent George A. Parker, in an address before the City Plan Commission, outlined a plan by which the low lands along the river could be raised above flood level by dredgings from the river and from channels cut into the bank of the river so as to afford miles of dockage facilities and acres of land suitable for factory sites. Hartford is situated in a basin of the valley of the Connecticut River extending from Bissell's Ferry on the north to Rock Hill on the south, about sixteen miles long and varying from one to two miles wide. The portion of

the basin south of the Hartford bridge, an area of fourteen square miles, is the portion which Mr. Parker would have developed first. Through the low lands, at right angles with the trend of the valley, at distances of 1,000 feet or whatever distances were necessary in order to make the cuts and fills, equal water ways would be cut, some of them a mile long. If both sides of the river were developed in



Plan of River Front Improvement

this way some fifty miles of water front could be formed with sufficient land between them for factory sites of exceptional value. A much larger possibility of development could be carried out if a dam fifteen or twenty feet high were built at Rich Hill. Then power for the factories could be developed as well.

A report on the proposed roadway along Park River, which is to be known as the Allen boulevard, was read before the City Plans Commission by Superintendent of Parks George A. Parker, who with Major Edward Mahl of the Street Board signed the report. The right-of-way is to be given by James P. Allen on the condition that the street is sufficiently well graded and constructed with a bridge across the river as to enable him to sell lots or otherwise dispose of his interests. The report gave as the reasons for opening this street that the city should control the banks of all streams within its borders and second, the opening up of a large tract of land for residential purposes.

Gets \$1,000 Prize for Best Roads

Trenton, N. J.—County Collector Edward P. Mount has received a check for \$1,000 from the New York "Herald" as the prize awarded to Mercer County for having the best stretch of roads between New York and Atlanta, Ga. The Board of Freeholders will decide what shall be done with the money. It will probably be turned into the road account.

Plainfield Likes Dust Preventives

Plainfield, N. J.—The testing of dust preventives has continued during the past year, and according to the annual report of Street Commissioner Andrew J. Garrett all the materials tried have met with approval. He says that Tarvia has been very effective. Gurr street, to which it was applied in 1908, is still in good order. Commenting on Texas and Standard oils, he says the former seems more lasting, though they seem much alike. Streets treated with both of these oils remain hard after moderate rains, but continual storms soften them more than they do Tarvia B. He gives the following figures of costs per square yard:

	Gals. Used.	Cost. Material.	Cost. Labor.	Total.
Tarvia .....	.4174	\$.0255	\$.0050	\$.0305
Dustoline .....	.2089	.0146	.0015	.0161
Texas oil .....	.3884	.0175	.0025	.0200
Standard oil .....	.3669	.0122	.0025	.0147

A total of 81,939 gallons of Tarvia B, Dustoline, Texas oil and Standard oil was used and the total length of streets treated was 22 $\frac{1}{4}$ miles. The total area covered was 252,490 square yards and the cost of above materials was \$3,816.92. The cost of applying the materials was \$597.87, making an average cost of 1 $\frac{3}{4}$ cents per square yard for materials and labor. The above amounts are exclusive of repairs.

Syracuse Paving Record

Syracuse, N. Y.—During 1909 Syracuse laid 4.62 miles of paving, as compared with 2.56 miles the year before. The following are the quantities of each kind laid: Brick, .96 miles; asphalt, 2.91; sandstone, .10; macadam, .65.

SEWERAGE AND SANITATION

Progress of Baltimore Sewerage

Baltimore, Md.—The Sewerage Commission during 1909 laid 47.15 miles of sanitary sewers and 6.7 miles of storm-water drains. Work on the disposal plant and pumping station amounted to \$435,000, while the total cost of all the work was \$1,885,000.

Spitting Forbidden in Elizabeth

Elizabeth, N. J.—The ordinance designed to prohibit spitting on sidewalks has passed the Board of Health on its final reading and an effort will be made to have it strictly enforced. It is an amendment to the measure already in effect prohibiting spitting in cars and other public vehicles.

Trouble Over Sewer Beds

Marlboro, Mass.—A number of new suits have been started against Marlboro by citizens of Sudbury, who claim that they have been damaged by the pollution of streams into which water is discharged from the filter beds.

Sewerage and Water Board Holds Annual Smoker

New Orleans, La.—The second annual smoker of employees of the chemical and mechanical departments of the Sewerage and Water Board was held at the Victoria Hotel, December 18, with 150 men present. The object of the meetings is to bring about greater co-operation by having the men of the different departments meet and know each other more intimately. Superintendent George C. Earl spoke of the magnitude of the work and what it means for the city. Remarks were also made by A. B. Woods, first assistant engineer of the pumping station; John T. Eastwood, principal assistant engineer; A. G. Moffat of the Water Collection Department; E. A. Fowler, J. S. Stanton, James B. Lee and L. G. Peterson. George B. Rice presided.

Rights of City in Sewer Controversy

Scranton, Pa.—Alleging that a sewer construction firm failed to complete a job according to contract, City Comptroller Edward Eisele is investigating the rights of the city in the matter. The sewer was laid about three years ago in the Nineteenth district, at South Main avenue and West Elm street, and the Comptroller claims that, according to contract, the sewer company should have extended the lines for house connections as far as the curb. Several of these property holders threaten to sue the city for the extra expenditure, claiming that they paid an assessment which was based on the complete sewer, with extensions to the curb lines. The amount involved is several thousand dollars.

Enforcing Smoke Ordinance with Camera

Milwaukee, Wis.—During the last year twenty-one violators of the anti-smoke ordinance were brought into court and fined, according to the annual report of Smoke Inspector Charles Poethke. Of this number eleven were dismissed, on payment of costs, five paid the minimum fine, while three were dismissed without cost. The cases won by the city were on proofs by photographs which were submitted as evidence. Offenders admitted violations which previously had been denied, and in this way convictions were brought about more easily. It is expected that there will be fewer violations now, as the new ordinance, providing for fines from \$25 to \$100, went into effect January 1.

Borough's Perilous Drainage

Shenandoah, Pa.—The Borough of Gilberton has filed a suit to recover \$1,000 from the Borough of Frackville for drainage upon the public road, causing an unsanitary condition and a possible epidemic.

WATER SUPPLY

Water Company Holds Deposits

Carthage, Mo.—People who have cash deposits in the treasury of the Carthage Water & Power Company have been trying for weeks, in vain, to get back their money, but nobody has yet been able to see a cent of it. The company always required patrons living in rented homes to make a cash deposit of \$2 before they would be granted water service, but since the company quit business early last month many of these people have asked for their deposit money, but the office employees could do nothing about it because they had no instructions from the company to refund deposits or to collect payment for any water service which had been rendered and not paid for prior to the sudden shutting down of the plant when the corporation tried to bulldoze the city.

Shut Water Off—Insurance Rates Go Up

Chester, W. Va.—The ringing of a cow bell at every fire-plug in the city was the official notice that the water was shut off and the town is now absolutely without fire protection, while insurance risks jumped from fourth to the sixth or country class. The South Side Water Company had a fifty-year contract with the city, but on application of Ex-Sheriff Charles Allison and Ernest Bonjour, a former policeman, went into court. Judge Nesbitt, of Wheeling, directed that the city be restrained from carrying out the provisions of the contract and the water was ordered shut off. The water company is willing to make a monthly contract, but Council has failed to act.

Claims for Municipal Water Works

Evansville, Ind.—That the water-works system of the city is worth two million and a half dollars; that if a private company bought the works and solicited business as industriously as a gas and electric light company does, the receipts would advance 33 1-3 per cent.; that the people of Evansville get their water for about half what people in the average city of this size pay, and that there is an enormous waste of water in the residence districts, were some of the statements of members of the retiring Board of Water Works, at their final meeting. Clerk Wm. Madden stated in a report which he submitted that the water works receipts in 1909 were the largest in the history of the department. They reached \$123,746.36, while the expenditures footed up \$102,250.96. "The receipts from water rents alone were \$111,789.01," said Clerk Madden. "This is a gain of \$7,501.11 over 1908."

To Make Water Tests

Harrisburg, Pa.—Within a few days Fish Commissioner Meehan will open a chemical and bacteriological laboratory in one of his office rooms and Chief Warden J. W. Criswell will be the chemist in charge. The main purpose of the laboratory will be to examine water from streams which have killed fish. Mr. Criswell has been taking a correspondence school course for some time and has been doing practical work in chemical laboratories in order to fit himself for his additional labors.

May Appeal to Health Commissioner

Johnstown, Pa.—The Board of Health and the Johnstown Water Company are engaged in a controversy regarding the quality of the water. The Board of Health, in a letter, recommended that the company install the Gerard ozone process at the various reservoirs. President C. S. Price replied that there was no evidence that the typhoid fever cases in the city had been occasioned by impure water. He considered that the policy of the company in enlarging its reservoirs and guarding the watersheds was the best method of insuring clean water. Replying to this letter the Board presented a comparative statement of typhoid cases and analyses of water showing the presence of bacilli coli. The communication further stated that if conditions were not improved an appeal would be made to the Commissioner of Health, at Harrisburg.

Meter Rates Reduced by Half

Houston, Tex.—After months of consideration the Commissioners have decided to reduce the rates for water from 30 to 15 cents for 1,000 gallons; 1,200 consumers will be benefited.

Mayor Vetoes Forestry Contract with Uncle Sam

Salt Lake, Utah—Believing that Salt Lake was giving away too many rights to the United States Government under the proposed forestry reserve contract, Mayor John S. Bransford vetoed the contract recently passed by the City Council. Mayor Bransford says the city will have to stand too great an expense under the contract as it is now drawn, and will have too little to say of the work done on the city's watershed in Parley's and City Creek Canyons. He says he is in favor of replanting these lands for the conservation of the city's watersheds, but does not approve of the present contract.

Urge State Conservation of Water

Trenton, N. J.—The third annual report of the State Water Supply Commission pleads the necessity of conserving the potable waters of the State. The necessity of legislation to prevent the diversion of underground water to points outside of the State has been emphasized by the attempts of the Hudson County Water Company to supply Staten Island. The report goes on to state the reasons why it denied the application of Newark and Paterson for control of the Wanaque watershed. Interests of all the cities in the northeastern portion of the State require State control of potable water that none may be handicapped in the future by an insufficient supply. The Commission advocates the construction of an impounding basin at Mountain View, where storage capacity of 65,000,000,000 gallons could be constructed, with a daily yield of 250,000,000 gallons.

Pure Water Delayed by Cold

Wilmington, Del.—Chief Engineer Kienle, of the Water Department, reported to the Commissioners that the recent extremely cold weather had caused breaks in valves at the new filter plant and had again halted the Department's efforts to give the city filtered water. Four 16-inch operating valves were cracked.

STREET LIGHTING AND POWER**Co-operation in Municipal Lighting**

Bloomfield, N. J.—Mayor Sutphen, in his message to the Town Council, recommends the purchase of the local lighting plant, as provided for in the franchise which expires next year. He suggests that as the neighboring town of Montclair is discussing municipal lighting, that co-operation in the enterprise might be possible.

Electric Output Increases; Gas Stationary

Holyoke, Mass.—The seventh annual report of the City Gas and Electrical Department, filed by Manager W. H. Snow, shows an increase for the year in electrical output of 50.8 per cent, and an increase in gas business of 1.6 per cent. During the year a number of mills abandoned gas lighting and many private consumers turned from gas to electricity. The profit on the plants is figured at \$43,654.60.

Mayors to Fight Combine

Grand Rapids, Mich.—Official announcement has been made of the plan of organization of the Commonwealth Power, Railway & Light Company, an \$18,000,000 combination of traction, gas, electric light and waterpower interests in Michigan. The new concern will take over waterpower companies on the Au Sable, Muskegon, Grand and Kalamazoo rivers. It will own street railways in Grand Rapids, Saginaw and Bay City, and electric and gas plants in Grand Rapids, Saginaw, Bay City, Kalamazoo, Battle Creek, Jackson, Flint, Pontiac and Cadillac. Details are to be completed by April 1, or the depositors of subsidiary stocks are to have their stocks returned. Mayor Ellis immediately sent telegrams to the Mayors of all the cities affected by the merger to enlist their co-operation in an effort to prevent the consummation of the merger.

Renews Franchise at Lower Rates

Butte, Mont.—The City Council has accepted a proposition from the Butte Electric Light and Power Company, under the terms of which the city's street lighting bill will be reduced about \$8,968 per year for the next year and a half. The cost of lighting the city hall, fire station and other municipal buildings will be reduced one-half. The new rates will become effective on January 1, 1910, and under the new schedule the city will pay for its 344 arc lights at the rate of about \$62 each per year net, against \$84 per year net, under the old terms. For its interior lighting the city will pay four cents per kilowatt hour instead of eight cents. Private consumers of electricity will pay 1.4 cents less per kilowatt hour than at the present time.

Everett's Lighting System Praised

Everett, Wash.—Everett has the unique distinction of being the best illuminated city, not only in the United States, but in the entire world, according to Matthew Peterson, a famous globe trotter, who spent Christmas in Everett. When the inveterate traveler first saw the city of smokestacks at night, its streets strung with incandescents and every business house advertised with a giant electric sign, he expressed wonder that all cities did not follow the splendid scheme of illumination.

FIRE AND POLICE**Firearms for Capable Specialists**

Atlantic City, N. J.—New licenses for special policemen will indicate on their back whether or not the officer is authorized to carry firearms. Knowledge of the weapon and the nature of their assignments will be considered in issuing the permits.

Police of Greater Birmingham Organized

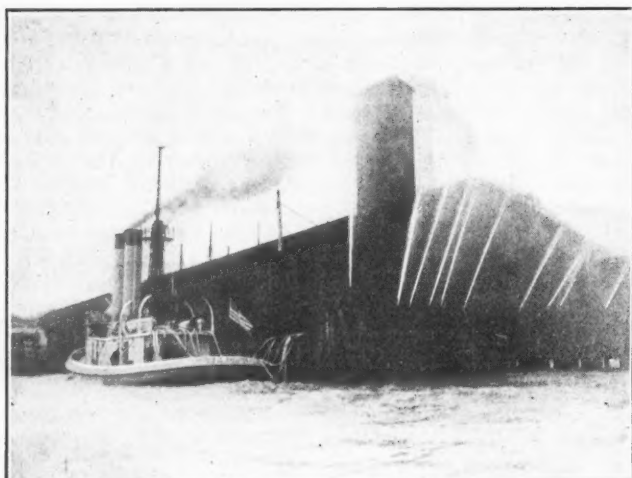
Birmingham, Ala.—The Police Commissioner has made arrangement for patrolling the 42 miles of the greater city's area. The police officers of the annexed districts have been retained and others added, bringing the total number of policemen up to 112.

Chicago Police Spend \$50,000 in Car Fares

Chicago, Ill.—Chicago pays, in round figures, \$50,000 a year for street-car fares of policemen who do not wear uniforms. Fifty thousand dollars means 1,000,000 rides and this is on practically 100 plain clothes men. On the basis of 300 working days a year, each man gets thirty rides a day at the expense of the city. When Chief Steward was asked about the item recently, he admitted that it was a good deal of luxury for the city to indulge in. "But, however, the city gets 55 per cent back, so it is not so bad," he said.

Fire Chief's Car Does Well

Dallas, Tex.—That the automobile used in the Dallas Fire Department by Chief H. F. Magee and assistant chiefs has traveled over 6,500 miles on Dallas streets, most of the distance in response to fire alarms, is the statement of Leslie B. Dooley, driver of the apparatus. "I have faith in an automobile now," said Dooley, "and I believe automobiles can pull through mud to better advantage than horses can."



Courtesy San Francisco Call

Fire Tug Sullivan in Final Test

San Francisco, Cal.—The illustration shows the final test made of the fireboat "Dennis T. Sullivan" in the presence of Mayor Taylor, the Board of Fire Commissioners, the Board of Public Works, Chief Shaughnessy, Chief of Police Cook and several supervisors. The test was made at the end of the Harrison street wharf.

Police Autos Must Pay State License Like Other Folks

Harrisburg, Pa.—The status of automobiles run by Police and Fire Departments has at last been settled in the eyes of the State authorities and every piece of apparatus must display a tag. This subject, which was one of the interesting series of questions raised in the enforcement of the new automobile tag law, was considered by the officials at the State Highway Department and passed clear up to the Attorney-General's Department. It is now held that cities or boroughs must take out tags for all automobiles whether ambulance, auto fire engine or automobile patrol. They must pay like any private person and display the tag with lights at night. In departments where there is no one designated as driver, but where doctors, policemen or firemen take the wheel when answering a call, no one need wear a driver's badge, providing uniform is worn, but in departments where there are regularly designated drivers a State chauffeur's badge must be displayed.

Substantial Improvement in Alarm Equipment

Houston, Tex.—The work of installing thirty-five new fire alarm boxes in the downtown section of the city and placing of the fire alarm wires under ground has begun, and when completed will make Houston one of the best equipped cities in the South in this respect. All the poles within the fire limits will be taken down and new cables placed in underground conduits. The boxes will be installed on pedestals at street corners and so located as not to be more than two blocks apart in any direction.

More Police Badly Needed in Washington

Washington, D. C.—In his annual report, Superintendent of Police Sylvester, in asking for 100 more policemen, says that the District is the largest police jurisdiction in the United States, has a more scattered population and more varied interests, and that the force is the smallest comparatively in the country, and at the same time accomplishes more successful work than any other. While Washington is low on big crime—like murders, big robberies, dangerous assaults and the like—it is undoubtedly the most disorderly city on the Atlantic Coast, if what the Major says is true. With all the shortage of force, with 99 men patrolling the beats by day and 198 by night, the books of the various precincts all add up to show a total number of 33,415 arrests, and nearly all of them were for the loud and noisy kind of wrongdoing. The Superintendent says the number of disorderlies is greater here than anywhere else. He points out that all these arrests were made while 10,000 acres of city were patrolled by 14 policemen and a fraction. With 343,000 people in the District, as the police census shows, the rate of arrests, therefore, is about one to every ten people in the whole District.

Washington Policemen Have Flag

Washington, D. C.—Maj. Richard Sylvester's aim since he became head of the Police Department has always been to put the police force on a military basis. Rigid discipline is maintained in the ranks, the patrolmen assemble for roll call in soldierly formation, wearing the same shimmering blue and brass as enlisted men, are put through regular foot and baton drills, and when seen in platoon or company formation in parade greatly suggest the military establishment of the United States. One thing has always been lacking. That has been battalion or regimental colors for the 600 or more policemen to follow. For several years Maj. Sylvester has been endeavoring to obtain for the department a suitable flag. Because of a lack of funds and suitable designs, he did not succeed in having his idea of the departmental standard carried out until yesterday. The flag now adorns his office in the District building. The flag measures about 6 by 3 feet, and is made of heavy silk. The background is red, in the center of which is a large white diamond. Worked into the diamond is a copy of the shield of the Metropolitan police force, done in blue, with gold lettering, thus bearing all the colors of the national emblem. With an American eagle surmounting the flag, Maj. Sylvester believes the departmental flag to be a model emblem. The flag will be used when the police of the city turn out in large numbers. When not in use for this purpose it will be kept in the office of the Major and Superintendent.

State Police Reserves

Des Moines, Ia.—At the suggestion of Chief of Police Miller of Des Moines a bill will be presented to the Legislature for the organization of the State Police Reserves. The membership will be composed of two or three men from each municipal Police Department. It is proposed that these men be concentrated in any city when there is a special need for them.

High-Pressure System Completed

Jacksonville, Fla.—The new high-pressure system with mains laid on all the streets of the business section of the city is completed. The pumping station near the foot of Newnan street is nearly finished. The pumps are electrically driven, two motors of 375 horsepower each have been installed and are expected to develop enough power to maintain a pressure of about 300 pounds at the station.

New Rules for Fire Department

Manchester, N. H.—The Board of Fire Engineers have received from Deputy Chief George H. Hammond, who compiled them, a draft of the proposed new rules for the management of the Fire Department. The rules cover 100 pages of typewritten copy. They are the most complete of any set of rules in New England and seem to cover every conceivable emergency.

Praise for Firemen and Police

Lockport, N. Y.—Mayor Minard, in his annual message to the new Common Council, praises the Fire Department, but suggests that the five companies be consolidated into one central headquarters for the economy of maintenance. One branch headquarters, he said, might be located in the milling district of East Lockport. He recommends that the charter be amended to give the fire companies a specified annual allowance. The Police Department is praised for increased efficiency and the installation of a patrol system and the flashlight box system.

Abolishes Celluloid Moving Picture Films

Newark, N. J.—Taking what he believed to be the first action of the kind in this country, C. Albert Gasser, Superintendent of the Department of Combustibles and Fire Risks, sent to each of the eighty moving picture shows in the city a notice that they will not hereafter be allowed to use ordinary celluloid films, but must utilize those of the so-called non-inflammable variety. This action was taken to reduce the alleged danger from fire in this class of entertainment places. In commenting on his order, Mr. Gasser said that he had for the past six months been observing carefully the films that have come into this city. He found that, while at first there were few of the non-inflammable films, there are now many of the better class of places where no other kind is used. All new films are of this kind, he added, and he concluded it would work no hardship on owners to enforce the order.

GOVERNMENT AND FINANCE

Receipts to Be Doubled by License Ordinance

Anniston, Ala.—License ordinance No. 478, adopted by City Council last month, covers every branch of business. Doubling the total revenue from the new schedule as published, it gives the city an income of more than \$50,000 for the year 1910, and this it is believed will place the city on a firmer financial basis than it has been heretofore. Special attention has been paid in the code to the cases which came up for a hearing before the Recorder for doing business without a license, at the instigation of the License Inspector, during the past year, on none of which the city was able to convict. Those who have heretofore evaded the payment of the required license will now be required to step up voluntarily and contribute to the running expenses.

New York Must Save on Its Autos

New York, N. Y.—Street cars, instead of six-cylinder automobiles, is reform with a vengeance, which newly-elected City Comptroller Prendergast has inaugurated in his Department by suspending indefinitely the use of the six automobiles assigned to the Department of Finance, on the ground that the city autos should be used only when necessary to facilitate the service of the various departments. "The subway is good enough for me," Mr. Prendergast added, "and it should be good enough for all the city officials." Altogether the city owns 300 cars, representing an initial outlay of nearly \$1,000,000, and in the Department of Finance alone the eight automobiles cost for maintenance alone last year \$12,000. The new Comptroller declares that \$1,500 per year for maintenance of an automobile is excessive and his inspectors will look into the subject thoroughly before the bills are paid.

City Engineer Introduces New System

Omaha, Neb.—City Engineer Geo. W. Craig has put in operation a new system of conducting his department. Hereafter specific branches of work will be in charge of certain men, who will be held responsible for the work of the men under them. The idea will be carried out still further in detail and some one man will be held responsible for each item of work, even to the repairing of a crosswalk.

Want Legislation for Home Rule

Passaic, N. J.—At a citizens' meeting the question of home rule for New Jersey cities was discussed and a desire was expressed to enlist the support of other cities of the State to secure necessary legislation. Mayor Spencer offered the following as a proposed bill covering the point:

That, in addition to the powers granted to municipalities of this State by their respective charters, and by the general laws of this State relating to municipalities, the municipalities shall have the power and authority and are hereby invested with the general powers and authority to enact all ordinances necessary for the protection of life, health and property; to declare and prevent and summarily abate nuisances; to preserve and enforce the good government, general welfare and order and security of such municipalities and the inhabitants thereof; and shall have power to enforce any and all ordinances in carrying out the purposes of this act by the imposition of reasonable fines or by imprisonment, or both; provided, that no ordinance shall be enacted inconsistent with the laws of this State, or inconsistent with the provisions of this act, or provided further, that the specifications of the particular powers in the laws of this State shall never be construed as a limitation upon the general powers herein granted, it being intended by this act to grant and bestow upon the inhabitants of every municipality of this State full power of self-government, and every municipality shall have all powers of municipal government not prohibited by the laws of this State or provisions of the Constitution.

Fair Rate Provision in Railroad Franchise

Duluth, Minn.—In granting a franchise to the Canadian Northern Railway for a right of way into the city, a novel provision has been inserted. It is to the effect that the city will not be discriminated against in the matter of rates.

Single-headed Commissions Instead of Boards

Jersey City, N. J.—Mayor H. Otto Wittpenn has prepared for introduction to the Legislature a bill for the abolition of all elective boards, creating instead a single-headed commission, and a hot fight is anticipated between him and the Board of Street and Water Commissioners.

COMMISSION GOVERNMENT FOR CITIES

El Paso Adopts Form by Five Majority—Agitation in Other Municipalities for Such Change

El Paso, Tex.—This city has voted for the adoption of the commission form of corporation by five majority. F. V. Bless was elected Mayor and R. F. Vaughan and T. G. George Commissioners.

Hattiesburg Asks for Commission

Hattiesburg, Miss.—City Council is considering the matter of submitting to the people a proposition to change the form of government of the municipality to a commission form, and it is altogether probable that an election for that purpose will be ordered.

The law providing for a commission form of government in Mississippi has been in effect only since the 1908 session of the Legislature, and in the event Hattiesburg decides to adopt this new form it will be the only city in the State which has taken advantage of the new law. The petition asks for three Commissioners and a Mayor, the Commissioners all to be elected from the city at large, without regard to ward lines. The law requires that in order to secure an election to change the form of government a petition signed by 10 per cent. of the qualified electors of the municipality shall be presented to the City Council, whose duty it will be to order an election to determine the sentiment of the people. A majority of the votes cast will carry the election.

Memphis and Commission

Memphis, Tenn.—Memphis is about to enter upon the experiment of government by commission. The last Legislature gave the city a charter, based upon the ideas as embodied in the municipal reform regulations provided for Galveston and Houston, Tex., Des Moines, Ia., and other larger cities, abolishing bi-cameral Councils and turning over the entire management of the city's affairs to a Mayor and four Commissioners. The Memphis plan differs some from a plan that is proposed for Chattanooga, but in its essential features it is the same. The system has its antagonists, and these are to assail the law before the courts.

Mass Meeting Indorses Commission Government

Lexington, Ky.—A mass meeting of citizens was called by the Lexington Commercial Club. After listening to addresses by a number of citizens, a series of resolutions favoring the commission form of government was unanimously passed. Legislative action will be necessary before the proposed new charter can be adopted. In order to secure this and to make the movement general throughout Kentucky letters have been addressed to the Commercial Clubs of other cities of the second class, asking that delegates be sent to a meeting to be held in Lexington to take the whole subject under consideration.

Municipal Council Increases Salaries

Haverhill, Mass.—In making up the salary bill the municipal council granted increases aggregating \$3,000. Among the increases are: City Solicitor, \$200; Assessors, \$200; Clerk of the Street Department, \$250; City Engineer, \$150; permanent firemen, \$2.87½ a day instead of \$2.75; Captains, \$3 a day. The salary list will show a total increase of about \$10,000, the advance being the largest ever granted in one year.

Mayor and City Clerk Arrested

Juneau, Alaska.—Mayor Emery Valentine and City Clerk J. Montgomery Davis have been arrested, accused of refusing to permit the books of the city to be examined. The complaining witness is Attorney John Rustgard, and under the Alaska law the offense is a felony. Recently the city went into the business of selling gasoline, and Rustgard, acting as attorney for the Shattuck Company, began injunction proceedings and obtained an order of court restraining the city from selling gasoline pending the result of the injunction case. Rustgard sought to ascertain the manner in which the city has been conducting its gasoline business, and the arrest followed the refusal of the city officials to permit him to see the books.

STREET CLEANING AND REFUSE DISPOSAL

Removed Trash Cans to Keep Streets Clean

Fort Worth, Tex.—Street Commissioner J. H. Maddox removed all cans New Year's Eve and replaced them the day after, the action being taken on account of the treatment the cans received Christmas night at the hands of the crowds of revelers. They were overturned and kicked about and the trash contained in them was scattered on the streets. It was decided that it would be much easier to gather up the cans and place them out of harm's way New Year's than to collect the scattered trash next morning.

Public Co-operates In Street Cleaning

New Orleans, La.—Commissioner of Public Works George S. Smith has improved the efficiency of the Street Cleaning Department by the custom of holding weekly meetings of foremen and superintendents. Complaints are discussed on these occasions and the men are told to invite from the householders suggestions as to relief that could be given by the Department. Householders have been encouraged to burn paper and rubbish in their back yards. In the central parts of the city merchants and others have been persuaded to keep their waste paper in receptacles indoors. A wastepaper collector gathers their papers without cost to the city.

New Garbage Ordinance in Effect

Philadelphia, Pa.—The new ordinance requiring the separation of ashes, garbage and combustible waste went into effect on the first day of the year.

Progress at Salt Lake City

Salt Lake City, Utah.—Plans are under way for taking the control of the garbage wagons from the jurisdiction of the Board of Health and placing them under the Street Department. It is also intended to fill in a number of west side streets with ashes and other refuse which will not prove offensive to citizens. There are miles of road on the west side which need filling, and which would cost thousands of dollars if gravel and earth were to be used for the work.

Gift of Water for Street Flushing

San Jose, Cal.—The San Jose Water Company made the city a Christmas present of water for flushing the streets so that they might present a good appearance on the holiday. Men from the Street Department and firemen were engaged in the work for two days.

Cost of Garbage Plant for a Year

Scranton, Pa.—During the past year the total cost of maintaining the garbage collection system now in vogue in the city amounted to \$67,964. This is disbursed as follows:

Salary of superintendent of crematory plants, \$1,500.
Salary of the superintendent of collection, \$1,200.
Salary of clerk, \$720.
Stokers and laborers at plant, \$5,000.
Fuel for plant, \$3,000.
Telephones, \$84.
Lighting, \$200.
Salary of barnman, \$660.
Salary of watchman, \$600.
Repairs and incidentals, \$500.
Water rent, \$500.
Feeding and care of horses, \$8,500.
Repairs to wagons and harness, \$500.
Collecting garbage and ashes, \$45,000.

Farmers to Remove Street Sweepings

St. Paul, Minn.—Street Commissioner James J. Regan and City Controller Louis Betz have conferred with Alvin Rowe, president of the Garden Growers' Association, as to the practicability of arranging for a central dumping ground where the wagons of the Street Department may deposit their loads, so that farmers can most conveniently take the refuse away and use it for fertilizing purposes. The members of the Association favor the plan.

Claim Payment for Sprinkling Not Done

Syracuse, N. Y.—As an echo of the suspension of street sprinkling and the flushing of paved streets in September last because of the low water supply, claims amounting to \$7,000 have been filed at the City Hall demanding payment for the work up to November 1, the time at which the contracts terminated. Commissioner F. M. Westcott has offered the contractors 10 per cent of the amount of their contracts, representing their probable profits.

RAPID TRANSIT

Enforcing Car-Heating Law

Cincinnati, O.—W. Kelsey Schoepf, head of the Cincinnati Traction Company, has been indicted, charged with failure to keep the temperature in certain street cars up to the standard of 60 degrees, as provided by statute. A fine of from \$100 to \$500 is the penalty.

To Build Gyroscope Road

New Westminster, B. C.—Work already has been begun on the first gyroscope railway in America to be devoted to commercial transportation purposes. The line will encircle Okanagan. Spur tracks will run to points where business warrants.

New Hose Bridges Keep Cars on Time

Syracuse, N. Y.—For the first time since they have been in the possession of the Syracuse Rapid Transit Company the new hose bridges were used at the Snow Building fire. About a month ago the company purchased these new devices, which allow the trolley cars to operate without interruption during a fire. The bridge is so constructed that by laying them on the track the car can pass over the hose, for which there are openings in the side of the bridge. In this way the late cars ran on schedule time during the progress of the fire.

MISCELLANEOUS

Ordinance Forbids Seating of Tardy Theatregoers

Cleveland, O.—Cleveland has set the pace for American cities in legislating against coming late to theatres. The City Council has passed an ordinance forbidding the seating of any theatre patron after the first act has begun until the curtain goes down on that act. Violation of the offense brings a hundred-dollar fine. Theatre owners are rather wrought up over the ordinance and may fight it.

Peddlers Would Make Themselves Heard

Chicago, Ill.—Three hundred members of the Market Peddlers' Association have held a meeting for the purpose of expressing their protest against the new ordinance prohibiting them from crying their wares. The ordinance, they claim, is the result only of the fight of the grocers' and butchers' organizations against them. The housewives of the city, they say, welcome them and their cries because they can get produce from them with convenience and at low prices.

City Plans Commission

Seattle, Wash.—An ordinance will be submitted to Council by a number of commercial and professional organizations calling for submission to the people of a charter amendment providing for the appointment of a city plan commission. This commission shall take under consideration improvements and changes in lines of transportation by surface, underground and water; the location, widths and grades of arterial highways necessary for the best treatment of the city; the development of the water front with its sea wall and wharves; the location of public buildings and municipal decorations, and such further extensions of and additions to the park and boulevard system of the city as it may, in conjunction with the Park Board, find advisable. The commission will consist of 21 members, some of them selected by civic and technical societies, others by the Mayor and Council. Suitable quarters will be provided and such clerical and engineering assistance as is necessary. Authority will be given to employ non-resident experts.

Plans for Sea Walls and Docks

Seattle, Wash.—City Engineer R. H. Thomson has submitted to Mayor J. F. Miller plans for a sea wall half a mile out in the bay which, with docks and filling out to the wall, will cost \$17,500,000. From Whatcom avenue, from the western end of which the wall is to be built, slips are to be projected into the Sound for a distance of from 550 to 1,280 feet, an area of 310 acres, and the water front would be increased from 7.75 to 11.27 miles.

Garden of the Gods a City Park

Colorado Springs, Col.—Colorado Springs found a handsome present in its stocking Christmas morning when it awoke to find itself in possession of the Garden of the Gods. Probably no other city in the country was dealt with so generously by Santa Claus, for the Garden of the Gods is famed far and wide as one of America's scenic wonders. The whole world, however, will share in the gift, for the terms of the gift stipulate that the Garden of the Gods shall forever be kept open as a public park, and the transfer of the great scenic resort prevents any possibility that it might ever come into the hands of persons who would exploit it for selfish purposes. The gift is made by the children of the late Charles E. Perkins, who was formerly president of the Chicago, Burlington & Quincy Railroad. He secured the tract, comprising 430 acres, by purchase in 1879, and has always maintained it free to the public. On several occasions he was offered large sums of money for the park, which, according to the valuation made by the Colorado Springs Park Commission, is worth \$200,000, but refused all of them, desiring that the great natural wonders should be free to all the people. In his will he made no disposal of the Garden of the Gods, but left a note, written on the back of an old envelope, which said:

It is my wish that my children give the Garden of the Gods to the City of Colorado Springs for park purposes.

To carry out his wishes legal steps were taken about a year ago when the tract was placed in the hands of three Colorado Springs trustees—D. V. Donaldson, Henry LeB. Wills and Henry C. Hall, and the ordinance formally accepting the tract became a law Christmas. The conditions of the gift are that the tract shall continuously and forever be designated as "The Garden of the Gods" and shall be maintained and used as a public park, free to all; that no intoxicating liquors shall be manufactured, sold or otherwise dispensed upon the premises; that no buildings other than those necessary to care properly for the property shall ever be erected.

The fantastic and marvelous rock formations of the Garden of the Gods have long been objects of admiration and study by travelers, geologists and tourists the world over. Here, tumbled riotously into the large natural garden, are rocks of grotesque and wonderful shape, taking the form of almost every conceivable animate and inanimate object.



ENTRANCE TO GARDEN OF THE GODS

Chief of all the groups is "The Gateway." It is formed by two immense slabs of red sandstone which tower to a height of more than 300 feet, twice that of Niagara Falls, and look down upon the beholder with memories of countless years of geological formation. Between them stands a smaller, a sentinel to guard the passageway; beyond appears the majestic snow-clad summit of Pike's Peak. Inside are the slender "Cathedral Spires," the ruins of a great temple; the "Tower of Babel"; "The Three Graces," "The Shipwreck," "The Siamese Twins" and many other representations of man and beast, and hundreds of rocks for which the imagination readily finds a name.

Newton Given New Playground

Newton, Mass.—Fifty-seven citizens of Newton have presented to the city the West Newton Common, comprising more than three acres, bordering on Elm and Webster streets. It was given for use as a playground, and was formally received by the Board of Aldermen, acting on behalf of the city.

LEGAL NEWS

A Summary and Notes of Recent Decisions—Rulings of Interest to Municipalities

Sewerage—Liability for Cost

Johns vs. Town of Sheridan.—Act of March 11, 1901, authorizes incorporated towns to construct sewers and charge the expense upon the property benefited, or, in its discretion, the whole or any part of the cost may be paid out of the general fund of the town. Other sections provide for the appointment of an engineer to make a survey and estimate of the cost and report description of lands benefited and damaged, and the amount of benefits and damages. Section 5 provides that the Board of Trustees shall thereupon (after hearing on engineer's report), by resolution or ordinance, determine the public utility of the work and adopt the report. Section 9 provides that the Board at the time they adopt the engineer's report shall determine what part, if any, of the cost of the work shall be paid out of the general fund. Section 15 provides that the town shall not be liable on account of such work unless the assessed benefits shall not equal the cost of the work, and then only for the deficiency and for such amount as the Board shall determine to pay out of the general fund. Held, that it was the legislative purpose to limit the liability of the town to a fixed amount, which should be determined by the Board at the adoption of the engineer's report and prior to the letting of the contract, and where the Board letting a contract for a sewer system made no provision, when the engineer's report was adopted, for payment by the town for extra work which they ordered after the contract was let, the contractor could not recover for it.—Appellate Court of Indiana, 89 N. E. R., 899.

Ordinances—Motives of Councilmen

Gardner et al. vs. City of Bluffton.—In passing an ordinance for a street improvement, the Council acts in a legislative capacity, so that the motives of its members cannot be inquired into by a court for purpose of determining the validity of the ordinance.—Supreme Court of Indiana, 89 N. E. R., 853.

Defective Streets—Contributory Negligence

Dunkin vs. City of Hoquiam.—A person traveling on a street at night must use greater care than a traveler by day, and, in determining the question of his contributory negligence, the jury may consider his health and soundness of body; for a traveler having physical infirmities must exercise care commensurate therewith.—Supreme Court of Washington, 105 P. R., 149.

Kansas Road Law—Construction

Heath vs. City of Iola et al.—The provision of the law of 1909 making all male residents of the State between certain ages amenable to the road tax therein referred to, being essentially a re-enactment of the old law, did not indicate any change of legislative policy in that regard.—Supreme Court of Kansas, 105 P. R., 32.

Adverse Possession of Street—Ancient Records

City of Lexington et al. vs. Hoskins.—Under the Constitution of 1890, providing that the statute of limitations shall not run against a municipal corporation, adverse possession under claim of ownership of land dedicated as a street does not affect the right of the city to have the street opened. Ancient surveys of a city, showing streets and lots appearing on the county records, are presumed to have been recorded by authority, though not formally certified for record.—Supreme Court of Mississippi, 50 S. R., 561.

Special Assessment—Actions

Hildreth et al. vs. City of Longmont et al.—The inclusion of illegal items in an assessment for a public improvement does not render the entire assessment void, where the illegal charges may be segregated from the legal. Where one suing to set aside an assessment for a public improvement alleges in the complaint the total amount of the illegal items charged in the assessment, the complaint, to state a cause of action, must allege a payment or tender of so much of the taxes as are due and payable.—Supreme Court of Colorado, 105 P. R., 107.

Grade Crossings—Nuisance—Admissibility of Evidence

Gulf, Colorado & Santa Fé Railway Company vs. City of Belton et al.—Revised Statutes of 1895, giving to the Council of cities the exclusive power over its streets, authorizing the abatement of nuisances and to define what shall be nuisances, and to control the construction of railroad crossings, authorize a City Council to abate a nuisance at common law or under the statute, irrespective of any ordinance on the subject, but, where the thing complained of is not a nuisance per se, the question whether it is a nuisance is one for judicial determination. Whether a bridge maintained by a railroad over its tracks for a public road is a nuisance is a question for the jury under proper instructions. Whether it is feasible for a railroad to establish a grade crossing over its tracks at a particular place is a subject for expert testimony. A civil engineer of 18 years' experience in the construction of railroads, including the grading of tracks at crossings, who is familiar with a particular crossing, and who testifies to the physical conditions surrounding it, is competent to give his opinion as to whether it is feasible to establish a grade crossing. In mandamus by a city to compel a railroad to establish a grade crossing, the railroad may show that it is impracticable or impossible to maintain a grade crossing under the circumstances, or that it is unreasonable to so require it on account of the danger to the public at the crossing.—Court of Civil Appeals of Texas, 122 S. W. R., 413.

Garbage Nuisance—Temporary Injury

City of Paris vs. Jenkins.—In an action against a city for damages for creating a nuisance by dumping garbage on a lot adjoining plaintiff's property, the damage alleged and proved was that resulting from the noxious odors, and not to plaintiff's land, and the evidence showed that the garbage could be removed from the city's lot, and that the amount of garbage dumped was decreasing, and the city was preparing to construct an abattoir, when it would quit dumping garbage. Held, that the injury resulting from the nuisance was only temporary, and hence plaintiff's measure of damages was the depreciation in rental value of his property because of the nuisance, and not its depreciation in market value.—Court of Civil Appeals of Texas, 122 S. W. R., 411.

Fire Limits Ordinance—Remodeling

City of Mayville vs. Rosing.—A city ordinance, enacting that it shall be unlawful to construct any wooden building within the fire limits of the city, is not violated by a repairing or remodeling of a wooden building, unless it is done to the extent of substantially erecting a "new building" as that word is commonly understood. Before an ordinance declaring it unlawful to construct any wooden building within the established fire limits of the city is violated, the acts must be brought within the terms of the ordinance, or synonymous terms, or terms included within the terms of the ordinance. The words "repairing" and "remodeling" are not synonymous or included within the meaning of the word "building," within an ordinance prohibiting the erection of a wooden building within the fire limits.—Supreme Court of North Dakota, 123 N. W. R., 393.

Obstruction of Stream—Nuisance

Hedrick vs. City of St. Joseph et al.—Where a fill in a stream formed part of a street, and constituted a nuisance by obstructing the flow of water, that some city employees had removed debris from the mouth of the culvert under the fill, and that the city by its non-action permitted the obstruction to remain after the territory had been brought within the city limits by being platted and laid off into blocks with streets by the owners, did not show that the city had assumed jurisdiction and supervision of the street, so as to render it liable for damages to plaintiff's property resulting from the overflow of the water.—Kansas City Court of Appeals, 122 S. W. R., 375.

Enforcement of Assessment—Counter Claim

Dawson et al. vs. Hipkind et al.—A counter claim for damages for fraud on the part of the Common Council in accepting a street improvement cannot be set up in a contractor's suit to enforce an assessment for the improvement.—Supreme Court of Indiana, 89 N. E. R., 863.

Contractors' Bonds—Actions

City of Alpena vs. Title Guaranty & Surety Co.—A total failure to require a contractor to give a bond under Comp. Laws 1897, providing that a contractor for a public work shall give a bond for the payment of labor and materials, is such a breach of duty by the public officers as authorizes an action against them in their individual capacity by the party injured thereby; but the purpose to protect the officers of a city against such action by the giving by the contractor of city work of a bond is not defeated by the fact that the bond is not in the precise form required by the statute, or because the obligee therein is the city, instead of the people of the State. The bond of a contractor for a public work, which recites the execution of the contract, and states that it is conditioned on the performance of the contract and to indemnify the city against claims for labor or materials, is conditioned on the contractor paying for the labor and materials used in the work. A city contracting for a public work, and requiring the contractor to give a bond conditioned on his paying for the labor and materials used in the work, may sue on the bond for the use of materialmen.—Supreme Court of Michigan, 123 N. W. R. 536.

Sidewalk Assessments—Jurisdiction

Clifton Land Company vs. City of Des Moines et al.—Where a City Council had jurisdiction to provide for the construction of sidewalks on petition of property owners, and, when the work was completed, such petitioning owners protested against the assessment because of the quality of the work performed, they waived the right to claim that the proceedings were so irregular that the city never acquired jurisdiction to order the construction of the walks for the first time five years thereafter. Where a city had jurisdiction to order the construction of sidewalks, and property owners had a hearing before the Council concerning their objections to the assessment, which were overruled, their statutory remedy by appeal was exclusive, precluding the maintenance of an independent suit in equity to restrain the levy and enforcement of the assessment, except for fraud not revealed until after the opportunity to show cause against the assessment had passed.—Supreme Court of Iowa, 123 N. W. R., 341.

Change of Street Grade—Compensation

People ex rel. City of New York vs. Stillings et al.—The person who is damaged by a change of grade of an adjoining highway, so as to be entitled to compensation, is the one who owns the property when the change is made. The right to damages caused by change of grade of a public highway is purely statutory, and is based on the moral obligation of the city changing the grade to pay the resulting damage to abutting owners. Laws of 1905, providing that the owner of property affected at the time of the enactment of Laws of 1893, as amended by Laws of 1894, providing for damages suffered by the change of grade of streets by a city, shall be entitled to the award of the Commissioners, is unconstitutional, as making a gift of city funds, in so far as it awards damages to one who acquired the property after the grade was changed.—Supreme Court of New York, 119 N. Y. S., 298.

Boulevard Improvement—Assessments

Scovel et al. vs. City of Detroit et al.—Where complainant's predecessors in title conveyed a strip of land to the city to widen a boulevard, "as contemplated by Act. No. 374," providing that improvements to the boulevard should be paid for by general taxation, and not by assessment on the abutting property, such abutting property was not subject to assessment for the construction of sidewalks on the boulevard, notwithstanding the repeal of Act. No. 374 by Local Acts 1889, which provided that such repeal should not impair any acts done or rights accrued or acquired under the act.—Supreme Court of Michigan, 123 N. W. R. 569.

Public Improvements—Lien for Materials

Milwaukee Lumber Co. vs. City of Milwaukee et al.—One furnishing materials to a subcontractor of a city contractor, who has sublet part of the work by a contract giving the subcontractor no right to look to the city for pay, is not within Laws 1882, giving materialmen a lien on money due from the city to the contractor or his assigns.—Supreme Court of Wisconsin, 123 N. W. R. 652.

NEWS OF THE SOCIETIES

American Society of Mechanical Engineers.—Meetings of the society will be held in New York on January 11, in St. Louis on January 15 and in Boston on January 21. The spring meeting of the society will be held this year as usual, in addition to the London meeting, which occurs in July. Atlantic City has been selected as the place for the spring meeting, and it will be held from May 31 to June 3, inclusive. The January meeting in Boston will take the form of a banquet at the Hotel Somerset, to be tendered jointly by the American Society of Mechanical Engineers, the Boston Society of Civil Engineers and the Boston branch of the American Institute of Electrical Engineers, to the presidents of the three societies, George Westinghouse, Geo. B. Francis and L. B. Stillwell, respectively, and other guests, including John Anderson Benschel, the incoming president of the American Society of Civil Engineers. The New York monthly meeting of the American Society of Mechanical Engineers will be held in the Engineer Societies' Building on Tuesday evening, January 11. The subject for discussion is lubrication. The paper upon efficiency tests of lubricating oils by Prof. F. H. Sibley, of the University of Alabama, will be presented, and important contributions upon the properties of lubricants, their efficiency, durability, characteristics, etc., will be made by Dr. C. F. Mabery, of Case School, Cleveland, and Gen. Charles Miller, of Franklin, Pa.

Ohio Boards of Health.—The Tenth Conference of the State Board of Health, with representatives of local Boards of Health, will be held in Columbus, January 20 and 21, according to notice sent out by Dr. C. O. Probst, secretary of the State Board. This conference is for Boards of Health and Health Departments of all cities and for all villages which had a population of 3,000 or over at the 1900 Census. An interesting program is being prepared, specially adapted for cities and large villages. In addition to papers by representatives of some of the local boards there will be addresses by Rufus E. Miles, of the Bureau of Municipal Research, Cincinnati; Dr. Wm. C. Woodward, Health Officer, District of Columbia; Dr. L. L. Lumsden, of the Public Health and Marine Hospital Service; Dr. Cressy L. Wilbur, Chief Division of Vital Statistics, Census Bureau, and Dr. Luther H. Gulick, of New York City, a leading authority on school hygiene. The law providing for these conferences provides that Boards of Health shall send delegates when a call for a conference is made by the State Board of Health.

National Civic Federation.—Upon request of Seth Low, of New York, president of the National Civic Federation; Dr. C. O. Probst, of the State Board of Health, as president of the American Public Health Association, has appointed six delegates from the association to the meeting to be held in Washington, D. C., January 17, 18 and 19, to consider uniform health legislation. The delegates are: Dr. William C. Woodward, Washington, D. C.; Dr. M. L. Price, Baltimore, Md.; Dr. John T. Nagle, New York, N. Y.; Dr. E. C. Long, Richmond, Va.; Dr. Samuel G. Dixon, Harrisburg, Pa., and F. L. Hoffman, Newark, N. J., statistician for a leading insurance company.

Indiana Municipal League.—Arrangements for the entertainment of the Indiana Municipal League in Richmond, Ind., June 21, 22 and 23, were formally promulgated when at the suggestion of Councilman Engelbert a committee of five was appointed to work in conjunction with the State committee in charge of the program. The new committee consists of three members of Council and two citizens and is as follows: H. H. Engelbert, William Bartel and Oscar Williams from the Council, and Fred Lemon and Matt Von Pein representing the citizens. Ex-City Clerk C. W. Merrill, who is Secretary of the State organization, presented a few views upon the matter and fathered the request made by Mr. Engelbert, saying that the meeting would be one of the most important and interesting gatherings held in the State during the year, and that the city could not help but be greatly benefited by the deliberations and presence of the body which is working for the general betterment of all municipalities.

Illinois Commission Form of Government Association.—Several changes in the bills for a commission form of government were made at a meeting of the executive committee at Springfield, December 29. The provisions of the Barr and Gorman bills, fixing the salaries of the Commissioners and the regulations regarding the registration of voters at elections for Commissioners, were those affected. In order to make the commission bills conform to the recent decision of the Supreme Court holding the primary law unconstitutional it was found necessary to strike out several clauses which were almost identical with the words of the primary law to which the high court took exception. The bills as changed meet with the approval of the members of the House and Senate committees on municipal corporations. Under the new amendment the salaries will range from \$50 per year in cities having a population of 2,000 up to \$10,000 in cities of 100,000 or more. In cities of the class of Springfield, having a population of between 60,000 and 80,000, the chairman will receive \$4,500 a year and other members of the commission \$3,500. Those who attended the meeting of the executive committee were L. M. Ducey, M. J. Sheehan, Ottawa; Chas. Goff, Rock Island; Walter K. Kirk, Peoria; Dr. J. E. White, Dr. H. T. Morrison and Sydney S. Breese, Springfield.

Oklahoma Society of Engineers.—Fifty civil engineers in a State convention at Oklahoma, December 27, passed a resolution requesting that an office for a State Engineer be created. Officers were elected as follows: F. C. Hand, of Purcell, president; D. B. Merry, of Oklahoma City, first vice-president; E. E. Colby, of Chickasha, second vice-president; C. M. Lawrence, of Holdenville, third vice-president; Warren E. Moore, of Oklahoma City, secretary and treasurer. "Difficulty in Placing Tubular Piers in the Cimarron," was the subject of a paper read by B. S. Reeves, of Guthrie.

Engineers' Society of Western New York.—The following officers have been elected: President, Frank V. E. Bardol; vice-presidents, Frank N. Speyer and Leslie J. Bennett; secretary, Elwin G. Speyer; treasurer, Thomas J. Rogers; librarian, William A. Haven; directors, George C. Diehl, G. John Ullman and George T. Roberts. To encourage boys

in the surveying class at the night Technical High School, Buffalo, N. Y., a useful prize, valued at \$5, is offered to the young man having the best record at the end of the school year.

Western Society of Engineers.—W. C. Armstrong, Assistant Chief Engineer of the Chicago & Northwestern Railway, on January 5 presented before the society a paper on some of the features of the structural steel in the new Chicago passenger terminal of that railroad.

Calendar of Meetings

- January 12.
New England Water Works Association.—Annual meeting, Hotel Brunswick, Boston, Mass.—Willard Kent, Secretary, Narragansett Pier, R. I.
- January 12-14.
Michigan Engineering Society.—Annual meeting, Lansing, Mich.—Alba L. Holmes, Secretary, 674 Wealthy ave., Grand Rapids, Mich.
- January 14-16.
Indiana Engineering Society.—Annual convention, Indianapolis, Ind.—Chas. Brossman, Secretary, Union Trust Bldg., Indianapolis, Ind.
- January 18-20.
American Society of Heating and Ventilating Engineers.—Annual meeting, New York, N. Y.—W. H. Mackay, Secretary, P. O. Box 1818, New York, N. Y.
- January 19-20.
American Society of Civil Engineers.—Annual meeting, New York, N. Y.—Charles Warren Hunt, Secretary, 220 W. 57th st., New York, N. Y.
- January 20-21.
Ohio State Board of Health.—Tenth Conference with Local Boards, Columbus, O.—C. O. Probst, Secretary, Columbus, O.
- January 20-22.
American Society of Inspectors of Plumbing and Sanitary Engineers.—Annual convention, Trenton, N. J.—C. S. McCosker, Secretary, Mobile, Ala.
- January 25-27.
Canadian Society of Engineers.—Annual meeting, Ottawa, Ont.—C. H. McLeod, Secretary, 413 Dorchester st., West, Montreal, Quebec.
- January 26-28.
Illinois Society of Engineers and Surveyors.—Annual meeting, Cairo, Ill.—E. R. Tratman, Secretary, 1636 Monadnock Block, Chicago, Ill.
- February 7-12.
National Brick Manufacturers Association.—Annual convention, Pittsburg, Pa.—T. A. Randall, Secretary, Indianapolis.
- February 8.
Connecticut Society of Civil Engineers.—Annual meeting, New Haven, Conn.—J. Frederick Jackson, Secretary, Box 1304, New Haven, Conn.
- February 8-10.
Ohio Engineering Society.—Annual meeting, Columbus, O.—C. J. Knisely, Secretary, New Philadelphia, O.
- February 16.
New England Association of Gas Engineers.—Annual meeting, Boston, Mass.—N. W. Gifford, Secretary, 26 Central Sq., E. Boston, Mass.
- February 16-17.
Iowa Engineering Society.—Annual Convention, Cedar Rapids, Ia.—A. H. Ford, Secretary, Iowa City, Ia.
- February 18-21.
Northwest Cement Products Association.—Sixth Annual Convention, Great Northern Hotel, Chicago.—L. V. Thayer, Chairman Committee of Arrangements, Minneapolis, Minn.
- February 21-25.
National Association of Cement Users.—Annual meeting, Chicago, Ill.—Geo. C. Wright, Secretary. Address communications to Edw. E. Krause, Asst. to President, Harrison Bldg., Philadelphia, Pa.
- February 24-26.
American Society of Engineering Contractors.—Annual convention, Chicago, Ill.—Daniel J. Hower, Secretary, Park Row Building, New York City.
- February 24-26.
Illinois Association of Municipal Contractors.—Annual meeting, Chicago, Ill.—Orle T. Dunlap, Secretary, Edwardsville, Ill.
- March 9-11.
Iowa Association of Cement Users.—Annual meeting, Cedar Rapids, Ia.—Ira A. Williams, Secretary, Iowa State College, Ames, Ia.

PERSONALS

APPLEBY, CHARLES W., Evansville, Ind., has been appointed City Engineer, succeeding Samuel Mann.

BARROWS, Professor H. K., and Professor C. B. Breed, both of the Massachusetts Institute of Technology, announce that they have entered into partnership under the firm name of Barrows & Breed, 6 Beacon street, Boston, Mass. The firm will devote itself particularly to consultations, reports and designs relating to water power, water supply, sanitary and railroad engineering.

BRYANT, HENRY F., Mass. Inst. of Tech., '87, member Boston Soc. Civ. Engrs., Civil and Hydraulic Engineer, Brookline, Mass.; Philip W. Davis, Harvard '93, Law. Sc. Sch. '95, Assoc. Mem. Am. Inst. Elec. Engrs., Electric and Hydraulic Engineer; Henry D. Jackson, Mass. Inst. of Tech. '97, Assoc. Mem. Am. Inst. Elec. Engrs., Electrical and Mechanical Engineer; Frederic H. Keyes, Mass. Inst. of Tech. '93, Mem. Am. Soc. Mech. Engrs., Steam and Mechanical Engineer; William F. Sherman, Member Nat. Asso. Cotton Mfrs., Mill, Hydraulic and Steam Engineer; and Timothy W. Sprague, Mass. Inst. of Tech. '87, Mem. Am. Inst. of Mining Engrs., Mining and Electrical Engineer, have taken office at 88 Broad street, Boston, Mass., where they will engage in business as consulting engineers.

CALLENDER, WALTER R., Providence, R. I., has been appointed Police Commissioner.

COCHRAN, HENRY, Sergeant of Police of Elwood, Ind., has been appointed Chief by the Police Board.

CYR, ARTHUR L., Nashua, N. H., has been City Clerk for the sixth time.

DURAND, Prof. W. F., Director of Engineering in Stanford University; O. H. Ensign, Chief Electrical Engineer of the U. S. Reclamation Service, and Prof. H. J. Ryan, Professor of Electrical Engineering in Stanford University, have been appointed by the City Council as a Board of Consulting Engineers on the development of water power along the Los Angeles aqueduct.

FITZGERALD, J., City Engineer of Schenectady, N. Y., has appointed W. E. Weller Deputy City Engineer.

FETHERSTON, JOHN T., Superintendent of Street Cleaning, Borough of Richmond, City of New York, received the highest grade in the examination at Chicago, Ill., held for the purpose of selecting a Superintendent of Streets to succeed the late M. J. Dougherty.

GLEICHMAN, ALBERT C., Evansville, Ind., has been appointed Building Inspector by the Board of Safety.

GREENALCH, WALLACE, Albany, N. Y., has been reappointed Commissioner of Public Works.

HOLTON, HARRY S., First Assistant to the Chief Engineer of the Board of Public Service of Columbus, O., has been appointed Director of Public Service.

LEDERLE, DR. ERNEST J., New York City, has been named by Mayor Gaynor as Commissioner of Health to succeed Dr. Thomas Darlington; salary, \$7,500.

MORAN, SIMON F., Wilmington, Del., has been elected Chief of the Fire Department.

MURPHY, JOHN J., New York City, has been named by Mayor Gaynor as Tenement House Commissioner, to succeed Edmond J. Butler; salary, \$7,500.

O'CONNOR, JOHN F., Chief of Police of Columbus, O., for six years, has resigned; he will probably be retained in the department as a sergeant.

PECK, JOHN W., Evansville, Ind., has been reappointed Superintendent of the Water Works.

RUDOLPH, CUNO H., Washington, D. C., and Gen. James A. Johnston have been appointed by President Taft as Commissioners of the District of Columbia, to succeed H. B. F. Macfarland and Henry L. West, resigned, and Mr. Rudolph has been elected President of the Board, Maj. W. V. Judson, U. S. Army, being the other member of the Board.

SMITH, R. B., Sandusky, O., has been appointed Chief Engineer of the Board of Public Service, succeeding C. M. King.

STOVER, CHARLES B., New York City, has been named by Mayor W. J. Gaynor as Park Commissioner of Manhattan and Richmond, and President of the Park Board, to succeed Henry Smith; salary, \$7,500.

VOGLESON, JOHN A., Assistant to the Chief of the Bureau of Water, Philadelphia, in charge of the operation of all of the city's filtration plants, has been appointed Chief of the Bureau of Health, to succeed Dr. A. C. Abbott, resigned. The position has heretofore been filled by a physician. Mr. Vogleson is a member of the American Society of Civil Engineers, and was formerly in charge of the construction of several of Philadelphia's filtration plants.

NEW CITY OFFICERS APPOINTED OR ELECTED

Central Falls, R. I.—Chairman Common Council, Dr. A. A. Mann; Council Clerk, Thomas H. Finn.

Cincinnati, O.—Commissioner of Public Safety, James J. Fleming; Deputy, George E. Kearns; Chief Engineer Department of Public Service, F. H. Shipley; Superintendent of Water Works, Robert Laidlaw; Superintendent of Distribution, J. A. Hiller; Superintendent of Filtration, J. W. Elms; Engineer of Street and Sewer Repair Department, H. L. Conway; Smoke Inspector, Matthew Nelson, to succeed Dan Everson.

Cliffside, N. J.—Mayor, S. Wood McClave, re-elected; Counsel, Samuel G. H. Wright; Borough Engineers, McClave and McClave; Borough Clerk, Edward Sheehan; Recorder, Nicholas J. Schweitzer; Street Commissioner, Patrick Larkins; Chief of Police, William Kelly.

East Grand Forks, Minn.—Chief of Police, Paddy Sullivan; Assistant, Hugh Quigley; City Recorder, Ed. McHugh; Fire Chief, Martin Dillon; Street Commissioner Maurice Sullivan.

Elmira, N. Y.—Corporation Council, Michael Danaher, to succeed John F. Murtough; City Chamberlain, John J. Crowley, to succeed Henry J. Haase; Health Commissioner, James M. Craig, re-elected; City Sealer, Lawrence Murray, in place of Moses P. Pierce; Police Commissioners, Jerry Bergen and Max Brown, re-elected; Commissioner of Public Works, Charles A. Pulford, re-elected; Health Commissioner, Henry C. Hamilton; Park Commissioners, John Brand and Alex. Levy.

Greenville, Miss.—Clerk, Lyle Starling; City Attorney, Francis Cannon; Street Supervisor, George Bigney.

Haverhill, Mass.—President Municipal Commission, Ubert A. Killam; Superintendent of Streets, John Cashman; City Solicitor, George M. G. Nichols; Mayor's Clerk, Albert K. Johnson; Inspector of Wires, Woodbury E. Corson.

Holyoke, Mass.—President Board of Aldermen, P. M. Judd; Water Commissioner, T. J. Carmody; Assessor, J. J. Kelly; Clerk of Committees, J. C. Doran.

Jacksonville, Fla.—City Engineer, Philip Preoleon, re-elected; Superintendent of Streets, William C. West, for 23 years City Recorder; Board of Public Works, Henry G. Aird, Chairman; P. A. Dignan and Mr. Montgomery Corse.

Laporte, Ind.—City Clerk, William Krueger.

Lowell, Mass.—Member of Water Board, James G. Hill; City Solicitor, William W. Duncan; Clerk of Council, Frank M. Downing.

Lewes, Del.—Mayor for the ninth consecutive year, Dr. James Thompson.

Michigan City, Ind.—Chief of Police, Edward Haller.

New Castle, Ind.—City Attorney, William E. Jeffrey.

Newburyport, Mass.—President Board of Aldermen, Norman Russell; Common Council, Dr. Harry C. Hewitt, President, and J.

Herman Carver, Clerk; City Treasurer and Collector, Harry F. Whiton; Superintendent Highways, James H. Johnston; Inspector of Wires, J. Orrin Welch; City Marshal, John L. McLean; Chief Engineer, ex-Mayor Thomas Huse; First Assistant, John L. Lewis; Second Assistant, Frank E. Thurlow; Third Assistant, Joseph B. Page; Board of Health, Orrin J. Gurney; City Solicitor, Arthur Withington.

Newport, R. I.—Harbor Master, Thomas Shea; City Treasurer, John M. Taylor; City Solicitor, Jeremiah A. Sullivan; Street Commissioner, Jeremiah K. Sullivan; City Engineer, William H. Lawton; Member of Board of Health (for five years), George D. Ramsay; Assistant Engineer of Fire Department (for four years), Thomas S. Bowler; City Clerk, Francis N. Fullerton.

Pawtucket, R. I.—President of Council, John M. Ramsbottom; Clerk of Council, Frank L. Gatchell.

Portsmouth, N. H.—City Clerk, Lamont Hilton, for third term; Superintendent of Highways and Sewers, Rienzi Ridge; Board of Public Works, Charles F. Shillaber, Harry E. Boynton and John Newick.

South Bend, Ind.—Street Commissioner, J. P. Butler; Water Works Superintendent, Frederick Schafer. By the Board of Public Safety—Chief of Police, Guy L. Bunker; Fire Chief, Willford Grant; City Sealer, John W. Peters; City Electrician, William Williams; Secretary to the Board, Wilson Snyder.

Woonsocket, R. I.—President Common Council, William C. Bradlee; Council Clerk, William S. Preston; Highway Commissioner, Frank H. Mills; Water Commissioner, Thomas Bertenshaw; Park Commissioner, William H. Winterbottom; Sewer Commissioner, John C. Cosseboom; Health Officer, Dr. William C. Monroe; City Clerk, William O. Park; City Engineer, Frank H. Mills; Chief of Fire Department, Augustus J. Cole.

Woonsocket, R. I.—City Engineer, Frank H. Mills, re-elected; Water Commissioner, Thomas Bertenshaw, re-elected; Park Commissioner, William H. Winterbottom, re-elected; Sewer Commissioner, John C. Cosseboom, re-elected; Building Inspector, Frank P. O'Donnell, re-elected; Fire Marshal, Arthur J. Sutton; Fire Warden, E. A. Roman; Sealer of Weights and Measures, Herbert Whitaker; Highway Commissioner, Henry A. Hathaway; City Auditor, George W. Rickard; City Treasurer, Arthur J. Follet, Secretary, Samuel P. Cook; City Solicitor, Erwin J. France; Chief Engineer, Augustin J. Cote; First Assistant Engineer, Arthur J. Sutton, promoted from Second Assistant, and Second Assistant Engineer, David E. Stone, succeeding William H. White; Superintendent of the Fire Alarm Telegraph System, Pierre W. Plasse.

TRADE NOTES

Cast-Iron Pipe.—Chicago: Business is light but prices are firm as it is believed that the cost of production will be higher this year than last. Quotations: 4-inch, \$28.50; 6 to 12-inch, \$27.50; 16-inch and up, \$26.50. Birmingham: The outlook is considered good. No change in prices. Quotations: 4 to 6-inch, \$26; 8 to 12-inch, \$25; over 12-inch, \$24. San Francisco: Present conditions indicate a quiet market during the first quarter of the year. New York: Prices are firm because of improved demand, notwithstanding the easier situation in pig iron. Quotations: 6-inch, \$25.50, in car-load lots.

Lead.—Deliveries are very heavy, but most of the metal was bought previous to the recent advance in price. Few sales have been made in this market of late, but sellers claim that there is something of a shortage and are holding their prices firm. The American Smelting & Refining Company is asking 4.70c. for the metal, while outside interests are demanding 4.75c. In St. Louis the independent sellers control the situation and they are getting 4.65c.

Texas Oil.—Negotiations are in progress for the merging of the oil lands, pipe lines, refineries and other holdings of the Mexican Eagle Petroleum Company, which operates extensively in pany, of Mexico, and the Texas Com-

Texas and Oklahoma. According to advices received from Mexico City, it is stated that these combined interests will enter the European and South American oil markets in competition with the Standard Oil Co. Legal representatives of the two companies have been in conference in Mexico City. John W. Gates is at the head of the Texas Company, which has a capital stock of \$18,000,000. The Mexican Eagle Petroleum Company is capitalized for \$12,500,000. It has been waging a fight against the Waters-Pierce Oil Company for several months for control of the oil business in Mexico.

Culvert Pipe.—The Ashland Iron Works Company has disposed of its plant at Ashland and has moved to Bucyrus, O., where it will be incorporated under the name of The Bucyrus Foundry Company. The company will manufacture Carter cast-iron sectional culvert pipe exclusively.

Graphite.—The Joseph Dixon Crucible Company announces the publication of "Graphite as a Lubricant," Eleventh Edition. The present edition is more compact than its predecessor, the idea being to concentrate the information into quick, convenient form that is not bulky. The power-house engineer should find the newest edition of considerable value to him, since it deals especially with the lubrication and treatment of power-house machinery. Some thought has been put upon the appearance of this last edition, and large type with liberal margins obtains throughout the sixty-four pages of the book. A free copy of this edition will be sent free to anyone interested. Address Joseph Dixon Crucible Company, Jersey City, N. J.

Progressive Paving Company.—The McCarthy Improvement Company, Davenport, Ia., has completed a big season's work which is claimed to place it foremost among paving companies located west of Chicago and east of the Rocky Mountains. The company laid 246,000 square yards of paving, of which 100,000 yards were asphalt and 146,000 brick. Of the 112,000 yards laid in Davenport alone not a single protest against the work or complaint of workmanship was made. The company owns a fine equipment of horses and machinery. The machinery include steam plant, shovels for grading, concrete mixers, rollers, patent wagons and other equipment.

Smoke Helmet.—Chief Otto F. Utz, of the Niagara, N. Y., Fire Department, has been testing the smoke protector furnished by the Servus Equipment, of Newark, N. J. The test was made in a box car where an iron kettle filled with sulphur was set on fire. Chief Utz, wearing the protector, entered the car and remained there fifteen minutes. Assistant-Chief Miller, equipped with an old make protector improved by himself, also enter the car but was soon driven out. The helmet has a cylinder attached containing ozone cubes through which the air enters.

Price of Fire Hose.—The Eureka Fire Hose Mfg. Co. recently sold 2,000 ft. Red Cross fire hose to the city of Newburgh, N. Y., at 90c. ft., coupled. An item in a local paper stating that the city had bought "Paragon" hose at 90c. has been copied in a number of papers throughout the country, and the Eureka Fire Hose Mfg. Company wish to say that "Paragon" hose is never sold at less than the standard price of \$1 per foot.

PATENT CLAIMS

943,660. **FEEDER FOR CONCRETE MIXERS.** Oscar J. Dunham, Ames, Iowa. Filed Aug. 10, 1908. Serial No. 447,840.

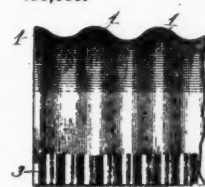
In a device of the class described, the combination of a frame comprising a hopper, a rotatable shaft mounted in the frame, a number of walls arranged radially on the shaft, a stationary partition at one end of the shaft, a stationary partition between the ends of the shaft, and an adjustable head mounted on the end of the shaft opposite from the stationary partition and capable of movement

toward and from the central partition, said parts being so arranged that the space between the two stationary partitions is in communication with the hopper, and also the space between the central partition and the movable one is in communication with the hopper so that by adjusting the movable partition the proportionate delivering capacity of the compartments on opposite sides of the central partition may be varied, a scraping and leveling bottom member for the hopper, and a spring for yieldingly holding it against the walls and partitions of the shaft.

942,472. **ELECTRIC LIGHTING.** Charles P. Steinmetz, Schenectady, N. Y., assignor to General Electric Co., a corporation of New York. Serial No. 13,718. Renewed July 23, 1906. Serial No. 327,401.

The method of modifying the color of the light from an arc existing within a transparent or translucent envelop, which consists in introducing into the arc a color-modifying substance in the condition of a salt of one of the general class of acids forming, or capable of forming, the envelop.

943,306. **CORRUGATED SHEET-METAL CULVERT.** Hugh W. Harry, Kansas City, Mo. Filed Apr. 29, 1909. Serial No. 493,035.



A culvert section of cylindrical form circumferentially corrugated and provided with flanges having finer corrugations or crimps extending in the same general direction as the circumferential corrugations; said

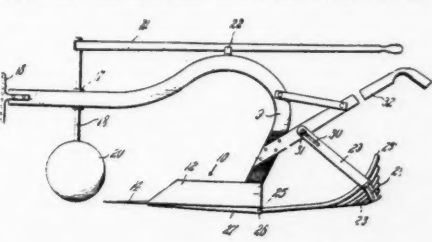
crimped flanges bearing an articulated relation.

942,256. **CORRUGATED - METAL CULVERT.** Alfred G. Hague, Des Moines, Ia. Serial No. 406,713.

An improved corrugated culvert, comprising a section formed of sheet metal and of cylindrical shape, said culvert being divided longitudinally at two diametrically opposite points, and an adjusting means at each of said divided portions, each adjusting means comprising two lugs secured to adjacent portions of the culvert, and a bolt detachably connected with said lugs, said parts being so arranged that when the bolt is moved in one direction the adjacent edges will be spread apart, and when moved in the other direction the adjacent edges will be drawn together.

943,897. **DITCHING PLOW.** Charles F. Sedell, Sutherland, Iowa. Serial No. 472,351.

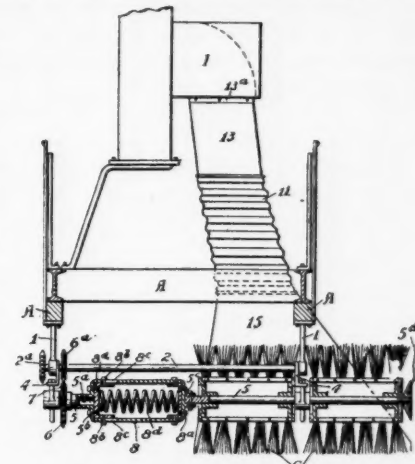
An implement of the class described comprising a scoop having a flat bottom and spaced vertical sides provided with forwardly inclined beveled cutting edges, a cutting edge formed on the front of the bottom, tapering shoes fixed to the outer face of the bottom near the longitudinal



side edges thereof, a mold board having a curved free end adapted to discharge earth to one side of the line of draft, a removable pin passed through the shoes and inner end of the mold board to pivotally connect the latter to the scoop, a draft beam fixed to the scoop, and means for adjusting the mold board in raised or lowered position.

943,881. **Street-Sweeping Machine.** Bernard Kern, Jr., Toledo, Ohio, assignor to Kern Auto Street Sweeper Corporation, New York, N. Y., a Corporation of New York. Serial No. 242,831.

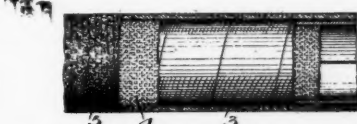
In a street-sweeper, the combination with the dust conduit, of a mouth-piece at the receiving end thereof, said mouth-piece having its inlet end broadened to form an elongated opening of greater length than the diameter of the conduit, and a plurality of partitions in the mouth-piece for



causing an equalization of the air current throughout its width, said partitions extending from top to bottom of the mouth-piece and having their lower ends spaced farther apart than their upper ends, substantially as described.

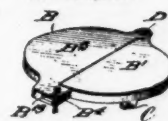
942,790. **FLEXIBLE CONDUIT FOR ELECTRIC WIRES.** Charles H. Miller, West Pittsburg, Pa., assignor to Safety-Armorite Conduit Co., Pittsburg, Pa., a corporation of Pennsylvania. Serial No. 385,520.

A flexible non-metallic conduit for electric wires, consisting of an inner air and water-tight flexible tube, a helical winding



of paper surrounding said tube, a muslin wrapper surrounding the paper winding and impregnated with an adhesive composition, and a braided or woven tubular fabric surrounding the muslin wrapping; substantially as described.

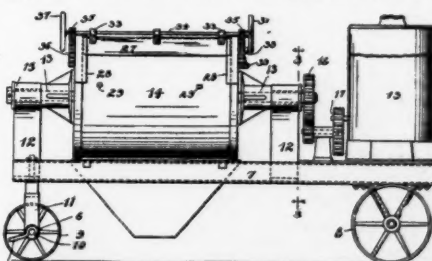
943,407. **WATER-CURB-BOX LID.** John J. Helmbuecher, Pittsburg, Pa. Serial No. 481,039.



A box lid adapted for use substantially as described and comprising segmental sections hinged together at one edge, and having fastening means at an opposite point and provided with depending hook like portions or lugs to underlie a flange on the box the sections combining to form a circular plate adapted to cover a curb box when the original lid is lost or displaced all substantially as and for the purposes set forth.

944,102. **CONCRETE MIXER.** Glenn S. Noble, Chicago, Ill. Filed May 9, 1904. Serial No. 207,021.

In a concrete mixer, the combination of revolvable drum formed of imperforate ma-



terial, and having a longitudinal opening therein, a curved door for said opening also formed of imperforate material, and a scraper strip along one edge of said opening over which the door is adapted to slide and which will scrape off material from the inner surface of said door.

THE WEEK'S CONTRACT NEWS

Relating to Municipal and Public Work—Street Improvements—Paving, Road Making, Cleaning and Sprinkling—Sewerage, Water Supply and Public Lighting—Fire Equipment and Supplies—Bridges and Street Railways—Sanitation, Garbage and Waste Disposal—Police, Parks and Miscellaneous—Proposals and Awards

To be of value this matter must be printed in the number immediately following its receipt, which makes it impossible for us to verify it all. Our sources of information are believed to be reliable, but we can not guarantee the correctness of all items. Parties in charge of proposed work are requested to send us information concerning it as early as possible; also corrections of any errors discovered

BIDS ASKED FOR

STATE	CITY	RECEIVED UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
STREET IMPROVEMENTS				
New York	New York	Jan. 14, 2:30 p.m.	Macadam roadways, brick gutters, cement walks, curb; catch basins and drain pipes at Coney Island Hospital site	M. J. Drummond, Comr. Charities.
Idaho	Lewiston	Jan. 16	Bldg. pavement on Main st. east of Union Depot	City Council.
New York	Long Island City	Jan. 17	Macadam repaving 103,120 sq. yds., regulating, grading, etc., 6 roads; sheet asphalt repaving, 12,150 sq. yds., on concrete; recubing, regulating, etc., 4 streets	Lawrence Gresser, Boro. President.
Oklahoma	Dustin	Jan. 17, 3 p.m.	Laying concrete cement sidewalks, 4, 5, 8 and 12 ft. wide	F. P. Hicks, Town Clerk.
Mississippi	Vicksburg	Jan. 17, 8 p.m.	Paving four blocks, any material; sewer, water mains, etc.	J. J. Hayes, Mayor.
New Jersey	Secaucus	Jan. 18, 8 p.m.	Grading, curbing, guttering, 7 sts.; surety bond, \$15,000	F. D. Boulanger, Boro. Clerk.
Kansas	Hutchinson	Jan. 18, 3 p.m.	Brick paving, 2,650 sq. yds.; 1,320 ft. curb and gutter, 96 ft. cb.	Ed. Metz, City Clerk.
Alabama	Birmingham	Jan. 19, 11 a.m.	Vit. brick paving, asphalt, bitulithic or granitoid	Maury Nicholson, City Engineer.
Ohio	Cincinnati	Jan. 21, noon	Improving Congress ave. through village of Glendale	Fred Drehs, Clk. Co. Comrs.
Ohio	Cincinnati	Jan. 28, noon	Improving Bramble ave., Special 980	Stanley Struble, Pres. Bd. Co. Comrs.
Ohio	Columbus	Jan. 28, noon	Grading, graveling, etc. Styler hill, Mifflin twp.	Board of County Commissioners.
Illinois	East St. Louis	Feb. 1	Vit. brick paving, 54,000 and 27,400 sq. yds. on 2 streets	W. J. Crocken, City Engineer.
Louisiana	Homer	Feb. 1	Concrete paving, 4 miles; engineer not selected	G. G. Gill, Town Clerk.
Alabama	Gordon	March 15	Constructing 51 miles of graded road in Houston County	W. J. Parish, County Com'r.
SEWERAGE				
Colorado	Denver	Jan. 14, 11 a.m.	Bldg. Dist. Sewers, submains, etc., for West and South Side Sanitary Sewer Dist.; cost, \$600,000	W. B. Lowry, Pres. Bd. Pub. Wks.
Illinois	Collinsville	Jan. 15, 7 p.m.	Improving Sanitary Sewer Dist. No. 2: 10,727 ft. 8-in., 4,017 ft. 10-in., 1,379 ft. 12-in. vit. sewers; 120 ft. 12-in. c. i. pipe, 36 brick manholes, 16 flush tanks, 10 vit. pipe lamp holes, 210 cu. yds. cement, septic tank	J. E. Simpson, Chm. Bd. Loc. Impts.
Pennsylvania	Media	Jan. 17, 10 a.m.	Constructing a cesspool in the Court House grounds	John S. Kenny, Clk. Co. Comrs.
Mississippi	Vicksburg	Jan. 17	Storm sewer, water mains, paving, etc., four blocks	C. R. Twiss, City Engineer.
Alabama	Montgomery	Jan. 17	Bldg. 5,000 ft. 12-in. sanitary sewer to South outfall	Robert Tait, City Treasurer.
New York	North Pelham	Jan. 18, 8 p.m.	Bldg. sewer system; 9,160 ft. 15-in., 1,183 ft. 12-in., 1,735 ft. 10-in., 28,811 ft. 8-in. vit. pipe; 1,500 cu. yds. rock excav.	Harold B. Roberts, Village Engr.
New York	New Brighton	Jan. 18	Bldg. temporary combined sewer in 3 streets	Geo. Cromwell, Boro. President.
Pennsylvania	Philadelphia	Jan. 18, noon	Bldg. 3 1-2 ft. brick sewer in Tenth st. and Chelton ave.	Geo. R. Stearns, Dir. Pub. Wks.
British Columbia	Prince Rupert	Jan. 19	Installation of sewerage works	Minister of Public Works.
California	Santa Clara	Jan. 24	Constructing \$20,000 sewer system for town	C. E. Moore, City Clerk.
California	East San Jose	Jan. 25	Bldg. sewer system, including septic tank	J. E. Fisher, Town Engineer.
New Mexico	Porteles	Jan. 26	Bldg. sewer system, water works and electric light plant	Herbert B. Ryther, Town Clerk.
Iowa	Boone	Jan. 26	Bldg. 9 1-2 miles 8 to 15-in. vit. sewer pipe in Fifth Ward	Karl C. Kastberg, City Engr.
Oklahoma	Weatherford	Jan. 28	Bldg. sewers, septic tank, etc.; see "Proposals"	J. J. Winne, Mayor.
Oklahoma	Ardmore	Feb. 1, noon	Bldg. 2 sewage disposal plants of 600,000 gals. per 24 hours capacity; bidders furnish plans, etc.	G. H. Bruce, City Clerk.
Texas	El Paso	Feb. 3, noon	Bldg. refuse incinerating and sewage pumping station, force main and sewage disposal works with appurtenances; also for furnaces, pumps and machinery; plans, etc., \$10.00; Hering & Fuller, 170 Broadway, New York City, Cons. Engrs.	Percy McGhee, City Clerk.
Maryland	Baltimore	Feb. 9, 11 a.m.	Contracts 46, 47, 48, 49 and 9 Sanitary Sewer System, inc. power and pump houses, conduits, circular drains, etc.	C. W. Hendrick, Ch. Engr. Sew. Com.
Ontario	Toronto	Feb. 15, noon	Sewer outlet, sewage tanks, supply of sludge valves, penstocks, special tile, c. i. pipe, etc.; bids by registered post only	Jos. Oliver, Chm. Bd. Control.
Oklahoma	Lawton	Feb. 16, 2 p.m.	Bldg. sanitary sewer system for North Additions	Asst. Sec'y Dept. Int., Wash., D. C.
New York	Syracuse	April 1	Harbor Brook improvement, 3 miles long, including constructing of intercepting sewer	Intercepting Sewer Board.
WATER SUPPLY				
Pennsylvania	Ridgway	Jan. 15	Furn. 125 h.p. engine, 800 gal. multi-stage centrifugal pump, 2 belts, etc.	H. B. Norton, Chm. W. W. Com.
Colorado	Lamar	Jan. 15	Bldg. rein. concrete head gate, etc., for Reservoir No. 4	Chivington Canal Co.
Ontario	Stratford	Jan. 15	Two elec.-driven turbine pumps, 1,000,000 and 1,500,000 gals.	T. D. Barnett, Chm. Water Bd.
Mississippi	Macon	Jan. 17, 7 p.m.	Pumps, ejector, condenser and check valve, valves, fittings, etc., for light and water plant; cost, \$20,000	G. B. Baskerville, Jr., C. E.
Mississippi	Vicksburg	Jan. 17	Laying water mains, storm sewer, paving, etc., 4 streets	C. R. Twiss, City Engineer.
Oklahoma	Ralston	Jan. 17	Bldg. \$25,000 water works and electric light plant, inc. c. i. pipe, steel tank and tower, pumps, well, bldg.; M. A. Earl & Co., Muskogee Engrs.	T. E. Bryant, City Clerk.
Nebraska	Cozad	Jan. 17	Bldg. combined electric light and water system: power house, 750,000-gal. pump, 75,000-gal. tank on 100-ft. tower, three 6-in. wells, 100 h.p. engines and two 100 h.p. water tube boilers, 19,702 ft. 8, 6 and 4-in. c. i. pipe, 5,200 ft. 2-in. g. i. pipe, 31 hydrants, valves, etc.	L. A. Quivey, Village Clerk.
New York	New York	Jan. 18, 11 a.m.	Contract 68: bldg. 7 steel pipe siphons, riveted steel, 9 1-4 and 11 1-4 ft. nominal inside diameter, 2.6 miles long; also 250 ft. cut-and-cover aqueduct; Contract 41: furn. and install. twenty 5x15-ft. sluice gates, 20 operating mechanisms, eight 66-in. stop disk frames, four 66-in. stop disks and 3 sets of drive shafting along aqueduct	Board of Water Supply.
Arizona	Phoenix	Jan. 20	Furnishing 50,000-gal. tank on 40-ft. steel tower	J. J. Riggs, Sec'y Bd. of Control.
California	Ft. Mason	Jan. 21, 11 a.m.	Bldg. pumping station, smoke stack, boilers, pumps, reservoir, flume and pipe at Presidio	Maj. Geo. McK. Williamson, U. S. A.
Mississippi	Jackson	Jan. 22, 3 p.m.	Boring artesian wells and furnishing machinery for pumping 4,000,000 gals. per 24 hours	H. Johnson, Gen. Mgr., Wtr. Comm.
Nebraska	Hastings	Jan. 24	Drilling 10-in. well at least 360 ft. deep	Council Water and Light Com.
New York	New York	Jan. 25, 11 a.m.	Bldg. portion of Yonkers siphon deep pressure tunnel, 16 ft. 7 in. diam., 2 miles long, 3 shafts 100 to 150 ft. deep	J. Waldo Smith, Ch. Engr. B. W. S.
New Mexico	Porteles	Jan. 26	Bldg. water works, sewer system and electric light plant	Burns & McDonnell, Scarritt Bldg., Kansas City, Mo., Engrs.
Oklahoma	Weatherford	Jan. 28	Bldg. water works standpipe, mains, etc.; see "Proposals"	W. K. Cunningham, City Clerk.
Oklahoma	Ardmore	Feb. 1, noon	Bldg. sedimentation basins and filtration plant, and extension of water main at city lake	G. H. Bruce, City Clerk.
Texas	Midland	Feb. 15	Constructing \$50,000 water works; O'Neil Eng. Co., Dallas	J. H. Haley, Mayor.
Ontario	Toronto	Feb. 15, noon	Furn. c. i. pipe, iron castings, special tile, etc.	Jos. Oliver, Chm. Bd. Control.

BIDS ASKED FOR

STATE	CITY	RECEIVED UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
BRIDGES				
Oregon	Portland	Jan. 14, 4 p.m.	Furn. material and bldg. steel viaduct for city over Sullivan's Gulch, E. 12th st.; six 32-ft. and two 64-ft. deck plate girder spans on steel bents, concrete pedestals and abuts.; 40-ft. roadway; two 10-ft. walks.	Waddell & Harrington, Cons. Engrs., New Nelson Bldg., Kan. City, Mo. Stanley S. Rable, Chm. Co. Comrs.
Ohio	Cincinnati	Jan. 14, noon	Bldg. bridge over Bloody Run, at Beach st., Mill creek twp.	
Texas	Dallas	Jan. 15	Furn. and erect. steel hwy. bridge and viaduct over Trinity river, 5 miles south; span over river 200 ft., with 2,520 ft. of plate girder span of 60 ft. each and one mile of gravel road; J. F. Witt, County Engineer.	George L. Fearn, County Auditor. J. B. Giraud, Tery. Engr., Phoenix. B. H. Miller, City Engineer. Guy C. Emerson, Supt. of Sts. H. J. McGregor, Com'r Pub. Wks. E. C. Zimmerman, Co. Surveyor.
Arizona	Florence	Jan. 15	Bldg. rein. concrete highway bridge, 700 ft. long, over Gila river.	M. Peterson, Sec'y Bd. Control. J. E. Hildt, County Clk.
Indiana	Indianapolis	Jan. 15	Bldg. stone and concrete bridge, Pogue's run, Commerce ave.	
Massachusetts	Boston	Jan. 17	Bldg. toll-gate way foot-bridge at West Roxbury.	
Washington	Tacoma	Jan. 17, 11 a.m.	Bldg. \$90,000 steel and rein. concrete bridge; removing old one.	
Ohio	West Union	Jan. 17, noon	Superstructure of steel bridge with cement floor.	
Manitoba	Winnipeg	Jan. 18, 11 a.m.	Removing present superstructure and furn. and erect new one and floor complete for Louise bridge over Red river.	
Oklahoma	Wagoner	Jan. 18, 10 a.m.	Bldg. 340-ft. steel bridge on tubular foundations.	
Pennsylvania	Philadelphia	Jan. 18, noon	Bldg. super. of steel beam and girder bridge, 58 ft. long, 60 ft. wide, encased in concrete, at Wissahickon ave. over P. & R. Ry.	Geo. R. Stearns, Dir. D. P. W.
Texas	San Antonio	Jan. 20, noon	Bldg. rein. concrete arch bridge over Medina river at Pleasanton road; two 100-ft. and two 30-ft. spans with 18-ft. roadway; 850 cu. yds. rein. concrete; 1600 cu. yds. rubble concrete; estimated cost, \$22,000.	Thos. E. Ramsey, County Auditor.
Florida	Jacksonville	Jan. 21, 9:30 a.m.	Bldg. 3 bridges: Over Six-Mile Creek, 241 ft. over all, 16 ft. wide, 43-ft. draw, rein. concrete approaches, 60 and 75 ft. long; Little Portsburg Creek rein. concrete bridge, 165 ft. long, with 6 panels, 16 ft. wide; Trout Creek bridge, 104 ft. steel span, 16-ft. roadway with steel truss and concrete floor.	G. L. Barnard, County Engineer.
Ohio	Monroeville	Jan. 24, 10:30 a.m.	Furn. and erect riveted truss bridge over river at Main st.; two spans 62 ft. each and one 80 ft. long; 20-ft. roadway with one 4-ft. sidewalk.	Fay E. Smith, Co. Aud., Norwalk. Board of County Commissioners.
Ohio	Columbus	Jan. 28, noon	Bldg. new floor system on 3 bridges.	
LIGHTING AND POWER				
Virginia	Richmond	Jan. 14, 4 p.m.	Furn. and erecting transmission lines.	E. E. Davis, Supt. Water Dept.
Washington	Spokane	Jan. 15, 2 p.m.	Three transformers with protection devices, con., etc.	Geo. W. Armstrong, Sec'y Bd. P. W.
Oklahoma	Stillwater	Jan. 15	Bldg. \$15,000 power house and heating plant.	J. H. Connell, Pres. State Bd. Agr'l.
Mississippi	Macon	Jan. 17, 7 p.m.	Furn. only compound high-speed engine, two 2,300-volt, 3-phase generators and exciters; three 2,300-volt, 3-phase vertical motors, one 3-panel switchboard and instruments, series street lights, 3 vertical turbine pumps, feed water pump, etc., for light and water plant; cost, \$20,000.	Mayor and Board of Aldermen.
Oklahoma	Ralston	Jan. 17	Bldg. \$25,000 water works and electric light plant, inc. bldg., triplex power pumps, a. c. generator, oil engine, poles, wire, c. i. pipe, steel tank and tower, etc.; M. A. Earl & Co., Muskogee, Engrs.	T. E. Bryant, City Clerk.
Nebraska	Cozad	Jan. 17	Bldg. combined water and electric light system, inc. power house, a. c. generator and exciter, 30 h.p.; switchboard, pole line wires, transformers, 2 gas producer engines, 40 to 50 and 65 to 75 h.p., two 100-ft. steel stacks, steam piping, boilers, engines, etc.	L. A. Quivey, Village Clerk. C. F. Humphrey, Q. M.
Maine	Ft. Williams	Jan. 20, 10 a.m.	Bldg. and remodeling electric light plant.	J. E. Wilson, Asst. Sec'y Inter. Dep.
Dist. of Col'bia	Washington	Jan. 21, 2 p.m.	Remodeling power plant at Government Hospital for Insane.	Herbert B. Rytker, Town Clerk.
New Mexico	Portales	Jan. 26	Bldg. electric light plant, water works and sewer system.	John J. Hanberg, Comr. Pub. Wks.
Illinois	Chicago	Jan. 29, 11 a.m.	Furn. and install lighting fixtures in new City Hall bldg.	
Illinois	Chicago	Feb. 2, noon	Bldg. conduit in W. 39th st.; brick or concrete conduit, 14x12 ft., and 2,340 ft. long in W. 39th st.	I. J. Bryan, Clk. Sanitary Dist.
Manitoba	Winnipeg	Feb. 15, 11 a.m.	Furn. and erect. various portions of equipment for terminal station at Winnipeg, turbine governors and gate valves for gen. station, hydro-elec. development.	M. Peterson, Sec'y Bd. Control.
MISCELLANEOUS				
Mississippi	Biloxi	Jan. 15	Bldg. 3,600 ft. of wooden breakwater on W. Beach st.	L. Lopez, Chm. St. Com.
Dist. of Col'bia	Washington	Jan. 17, noon	Bldg. 2 public convenience stations; Mt. Vernon Sq. and Dupont Circle.	Cuno H. Rudolph, Pres. Bd. Comrs. Wm. B. Frame, County Clerk.
Oklahoma	Ardmore	Jan. 17	Plans, etc., for \$115,000 rein. concrete County Court House.	Park Commissioner.
New York	Brooklyn	Jan. 20, 3 p.m.	Furn. material and erecting shelter house in McKinley Pk.; also bldg. steps and adjoining walls, 5th ave. ent. Sunset Pk.	R. A. Douglas, Chm. Police Com.
Illinois	Moline	Jan. 24, 6 p.m.	Furn. 45 h.p. auto police patrol and ambulance.	
California	San Bernardino	Jan. 24	Franchise for single or double-track railroad for 49 years, of electricity, steam or compressed air, to Rialto; W. W. Poole, et al., applicants.	Board of County Commissioners. C. G. Keyes, Co. Clk., Los Angeles
California	Puente	Jan. 31	Erecting County jail with 2 cells.	F. H. Todd, City Engineer.
Texas	El Paso	Feb. 3, noon	Bldg. refuse incinerating and sewage pumping station, etc., separate bids for furnaces, machinery, etc.	H. B. Rice, Mayor.
Texas	Houston	Feb. 7, noon	Erecting new City Auditorium; F. L. Dormant, Cons. Engr.	

STREET IMPROVEMENTS

Birmingham, Ala.—Citizens will vote on \$100,000 bonds for installation of paving plant and for other improvements. Address Mayor F. P. O'Brien.

Dothan, Ala.—City is considering paving of various streets and laying of about 50 miles of sidewalk.—R. W. Lizenby, City Clerk.

Montgomery, Ala.—Council has approved sale of \$50,000 street paving bonds.

North Birmingham, Ala.—Council has decided to expend \$30,000 on street improvements.

Little Rock, Ark.—Establishment of paving district to include East 2d st. is being urged; about \$18,000 will be expended.

Pine Bluff, Ark.—Jefferson County will build 20 miles of rock and gravel macadam road this year by contract.—James Gould, County Judge.

Phoenix, Ariz.—City is considering paving of streets of downtown district before constructing proposed sewers.

Coram, Cal.—Residents are urging either reconstruction of road from this city to Redding via Keswick and Copley or erection of bridge across Sacramento River.

Long Beach, Cal.—Board of Public Works

has authorized improvement of Elm ave. by grading, paving and construction of cement curb.—F. S. Craig, Secretary.

North Pasadena, Cal.—Citizens' League is urging improvement of Lincoln ave.

Ocean Park, Cal.—Board of Trustees has decided to extend curb and pave Rose and Linden aves.

Redlands, Cal.—City Engineer Hinckley has prepared plans for improvement of portion of Tennessee st.

San Bernardino, Cal.—Macadamizing of H st. is being considered; oiling of B st. is urged.

San Bernardino, Cal.—County Board has granted petition for grading and oiling of I st. of Colton.

Denver, Col.—State has offered to do \$5,000 of work of improving highway between Colorado Springs and city if County Commissioners of El Paso County will advance like amount.

Denver, Col.—Denver Motor Club has perfected plans for campaign for better roads throughout State.—C. P. Allen, Chairman.

Bridgeport, Conn.—Street and Sidewalks Committee will ask for \$156,541 for streets and bridges.

Hartford, Conn.—State Highway Com-

mission has received plans for proposed State road work as follows: From R. S. Hulbert, Engineer, 9,700 lin. ft. on Greenswood rd. in town of Winchester and 2,300 lin. ft. from A. B. Hill, Engineer, on road from Beard's Corner to the Washington Bridge in town of Milford.

Chicago, Ill.—Property owners have petitioned Board of Local Improvements to pave 200 miles of streets this year.

Pekin, Ill.—Board of Local Improvements has adopted resolutions for paving of S. 3d and Washington sts.; bids on several miles of paving will be asked soon.

Vincennes, Ind.—Mayor Jas. D. McDowell has recommended improvement of streets.

Dubuque, Ia.—Bids will soon be received for five blocks of Sarcos paving on Bluff st.—J. W. Lawlor, City Clerk.

Muscantine, Ia.—Plans are under contemplation for construction of a model road between here and Fairport; Supervisors and Rock Island engineers have agreed to build road on the north side of one track.

Perry, Ia.—Council has ordered creosote block paving on 24 blocks and bitulithic paving on 14½ blocks; cost between \$175,000 and \$200,000.

Hutchinson, Kan.—City proposes to ex-

pend \$30,000 on additional street paving and \$25,000 on sidewalks and curbing.

Wichita, Kan.—Board of City Commissioners is considering approximately 10 miles of paving at cost of nearly \$500,000; contracts for the work will be awarded this winter.

Winfield, Kan.—Petitions for paving of East 9th st. with brick; curbing, guttering and macadamizing Gary st., and the opening of the north end of Bliss st., have been presented to Council.

New Orleans, La.—Bids have been rejected for paving Joseph st. with asphalt.

Portland, Me.—Council is considering paving of Cumberland ave. and macadamizing of two other streets.

Haverhill, Mass.—Council has decided to spend \$125,000 next year for permanent street work.—John Cashman, Superintendent of Streets.

Lowell, Mass.—Mayor J. F. Meehan has recommended setting aside certain amount for smooth paving each year and continuance of block paving.

New Bedford, Mass.—Mayor C. S. Ashley has recommended widening of three streets and extension of Bowditch st.

Woburn, Mass.—Mayor H. D. Murray has recommended improvement of highways.

Ford, Mich.—Council will receive bids for grading and paving Biddle ave. for stretch of two miles through village; work to cost approximately \$70,000.

Redford, Mich.—Redford Township has decided to issue \$50,000 bonds for improvement of Grand River and Plymouth roads.

Duluth, Minn.—Council has received petition for paving Grand ave.; improvement of East Superior st. is being considered.

Duluth, Minn.—City Engineer Thomas F. McGilvray has estimated cost of paving various streets as follows: Garfield ave., Donnellite or tar macadam, \$74,000; granite, \$86,000, and sandstone blocks, \$107,000; Lake ave., sandstone block, \$8,000; 1st ave., with granite, \$12,000, and Grant ave., \$51,000.

Faribault, Minn.—Plans will soon be prepared by City Engineer F. W. McKellip for paving.

Gilbert, Minn.—Town of Fayal will grade Broadway st., main thoroughfare of Gilbert, next spring, and surface road with gravel and cinders.

Gulfport, Miss.—M. P. Bouslog, Chairman of Street Committee, is making plans for building gravel road along East Beach st.; grading of road has already been accomplished.

Mathiston, Miss.—Council has passed resolution authorizing issuance of \$10,000 sidewalk bonds.

York, Neb.—Dr. O. M. Moore and Frank Marshall, special committee to investigate oiled roads, will recommend paving of main-traveled streets with brick and oiled roads for side streets.

Asbury Park, N. J.—Mayor T. Frank Appleby has recommended that State automobile money be used for municipal road improvements.

Camden, N. J.—Mayor C. H. Ellis has recommended that Belgian block be used in future improvement of streets; also that steps be taken at once to abolish all railroad crossings at grade.

Chatham, N. J.—Mayor F. L. Kelley has recommended that Road Committee take up matter of improving Watchung ave.; also sidewalk of Centre st.; continuing of Passaic ave. is being considered by Council.

Hoboken, N. J.—Council has passed ordinances providing for paving of portions of Newark st., Castle Point terrace and Hudson pl.; also ordinances for repaving of twelve streets.—J. H. Londrigan, City Clerk.

Hoboken, N. J.—State Railroad Commission has recommended elimination of grade crossing at Willow ave., between this city and Weehawken.

Morristown, N. J.—Mayor Theodore Ayers has made reference to elimination of dangerous grade crossing at Morris st., on Lackawanna Railroad, in his annual message.

Newark, N. J.—Essex County Park Commission is considering paving of Park ave.

Orange, N. J.—Mayor A. B. Seymour has recommended that matter of sprinkling Main st. with oil be investigated.

Rahway, N. J.—Mayor Wm. Howard has recommended laying of certain amount of permanent pavement.

Roosevelt, N. J.—With idea of establishing direct highway between this place and Elizabeth. Mayor Joseph A. Hermann has recommended extension of Lafayette st.

Roselle, N. J.—Mayor Chas. MacQuoid has recommended laying of number of cross walks.

Roselle Park, N. J.—Mayor L. V. Ebert has recommended improvement of one or more thorough streets.

Rutherford, N. J.—Mayor David Bosman has recommended improvement of streets.

Seaside Park, N. J.—Ocean County Board of Freeholders has voted to advertise for

bids for construction of beach road to connect resort with mainland.

Westfield, N. J.—Committee on Sidewalks and Curbs has recommended continuing of curbing work to take in central portion of town.

Little Falls, N. Y.—Council is considering subject of paving.

Port Jervis, N. Y.—Mayor C. N. Knapp has recommended use of liberal supply of oil for coming season, extension of Erie st. and widening of Grand View ave.

Schenectady, N. Y.—Retiring Commissioner of Public Works R. S. Emmett recommended repaving of Nott Terrace.

Syracuse, N. Y.—City will lay about 15 miles of new sidewalks this year; contracts will be let for paving in three avenues.

Syracuse, N. Y.—Council has passed ordinances for paving Madison and Harrison sts.

Williamsville, N. Y.—Williamsville and Amherst Business Men's Association is urging building of 25 ft. road for proposed Williamsville highway.

Asheville, N. C.—Geo. S. Powell, city, desires data and prices on wood paving blocks.

Alliance, O.—Plans have been completed for macadamizing Patterson st., road from Alliance to Sebring, including paving of about half mile of the road across lowlands adjacent to the Mahoning River.

Cincinnati, O.—City has decided to improve Sutter ave. and other streets.—E. Henderson, Clerk of Council.

Cincinnati, O.—City Engineer J. H. Sundmaker has estimated cost of improving Ehrman ave. approach to Harrison ave. viaduct at \$3,374, and improving Findlay st. with granitoid concrete block at \$7,056.

Cincinnati, O.—County Commissioners have approved plans and specifications for the improvement of Congress ave., Glendale; cost \$10,891. Board ordered plans and specifications for improvement of Short ave., in Fernbank; cost \$6,315.

Columbus, O.—Every county in State has applied to State Highway Commissioner Wonders for State aid for good roads for next year.

Dayton, O.—City will expend \$250,814.28 for paving and \$59,617.60 for street improvements during year.

East Palestine, O.—City Council has passed ordinances providing for paving of Clark and Martin sts. with brick or block; work includes about 11,400 ft.—C. E. Vaughn, Engineer.

Norwood, O.—Bids will be received Jan. 15, noon, for \$30,000 bonds for improving several streets.—L. H. Gebhart, City Auditor.

Muskogee, Okla.—Asphalt plant of Parker-Washington Co. has been destroyed by fire; will be rebuilt at once.

Portland, Ore.—City has started proceedings for 117.5 miles of various sorts of street improvements, of which 67.4 miles will be hard surfaced; work calls for 13 miles of bit. pavement, 30.4 miles of asphalt, 10 miles of Hassam, 7.6 miles of gravel streets and 31.5 miles of grading.

Altoona, Pa.—Mayor S. M. Hoyer has recommended election on \$100,000 bonds for continuing street paving and on \$75,000 bonds for resurfacing worn-out asphalt street paving.

Lebanon, Pa.—Highway Committee has favorably recommended bill appropriating \$1,000 for macadamizing 7th st. and \$1,150 for widening Chestnut st.

Lebanon, Pa.—Mayor G. B. Marquart is favorable to paving of 8th and Cumberland sts.

Pittsburg, Pa.—Councilmanic Finance Committee has approved bond sale and contract ordinances for cutting "Hump," raising flood streets, improving West Carson st., Allegheny ave., Sedgwick st. and 2d ave. at Try st., all at a cost of \$1,080,000.

Williamsport, Pa.—Mayor Chas. D. Wolfe has recommended paving of alleys in business district and Campbell and Mulberry sts.

Central Falls, R. I.—Mayor A. Pigeon has recommended improvement of streets; also abolition of grade crossings.

Newport, R. I.—Mayor P. J. Boyle has urged citizens to push Washington st. boulevard matter.

Pawtucket, R. I.—Mayor R. A. Kenyon has recommended abolition of grade crossings.

Woonsocket, R. I.—Council has passed resolution adding \$1,300 to appropriation for highway work leading from River st.

Chattanooga, Tenn.—Council has passed resolution creating four paving districts.

Rutledge, Tenn.—Grainger County Court has voted \$100,000 bonds for building good roads.

Winchester, Tenn.—Citizens have defeated proposition to issue \$200,000 bonds for good roads.

Dallas, Tex.—Municipal Commission has perfected plans for paving about one mile of Elm st. with bitulithic; cost \$100,000.

El Paso, Tex.—Paving of Stanton st. is being considered.

Salt Lake City, Utah.—Board of Health is considering filling up miles of road on west side with certain kinds of garbage and ashes.

Fredericksburg, Va.—E. G. Hefflin, city, desires prices on concrete mixer.

Norfolk, Va.—Laying curb and pavement on Duke st. is being urged by East Side Improvement League of Sixth Ward.

Portsmouth, Va.—Local Improvement Boards of Sixth and Seventh Wards are considering macadamizing of center of High st.; width 60 ft.; E. B. Hawks of Street Committee submitted estimate of \$47,000, including curbing and guttering.

Aberdeen, Wash.—City Engineer has been instructed to prepare plans for paving of W. 6th st. with asphalt.

Baker City, Wash.—Resort st. is to be macadamized; improvement of Dewey ave. is being considered.

Hoquiam, Wash.—Bids will be received in February for about 60,000 sq. yds. brick, asphalt, bitulithic or wood block paving; cost \$350,000.—Z. T. Wilson, City Clerk.

Seattle, Wash.—Council is considering improvement of Westlake ave., North.

Seattle, Wash.—Council has appropriated \$5,000 for piling and bulkhead on 31st ave., South.

Spokane, Wash.—Paving of Indiana ave. is being urged.

Spokane, Wash.—Bids will soon be advertised by Board of Public Works for installation of asphalt paving plant.

Spokane, Wash.—Council has passed ordinance to pave Howard st.

Tacoma, Wash.—Sumner Commercial Club has urged County Commissioners to improve State aid road No. 38.

Tacoma, Wash.—Council has passed second resolution for paving 6th ave.; is also considering ordinance ordering plans for cement concrete sidewalks on Yakima ave.

Vancouver, Wash.—City has had plans prepared for paving 30 additional blocks.

Walla Walla, Wash.—East st. will be opened and widened in spring.

Kenosha, Wis.—City is considering paving with brick 6,000 sq. yds. on Elizabeth st.—R. H. Moth, City Engineer.

Oshkosh, Wis.—Board of Public Works will prepare plans and specifications for paving of seven streets.

BIDS RECEIVED AND CONTRACTS AWARDED

Pine Bluff, Ark.—E. J. Wetterson, Chicago, Ill., has secured contract for paving 32,000 sq. yds. with creosoted wooden blocks on concrete foundation in District 26, for \$85,000.

Chico, Cal.—W. S. Worswick, of the Chico Paving Co., has submitted an offer to the City Trustees to pave the four blocks around the City Park at 21c. per sq. ft.; he also offered to purchase the city rock crusher, which is up for sale, for \$1,000.

Long Beach, Cal.—Board of Public Works awarded paving contracts Dec. 29, as follows: C. W. Brashear, Los Angeles, for paving Appleton st., for \$20,276; Railway st., W., for \$13,019, and American ave., for \$32,154. Fairchild-Gilmore-Wilton Co., Los Angeles, for paving Railway st., E., \$17,721, and C. H. White, for paving Linden ave., \$40,086.

San Bernardino, Cal.—The contract for the construction of a macadam road on Orange st. has been let by the Supervisors to Ernest Frenzell, of Redlands, he being the lowest bidder; N. L. Levering bid 11 1/4c. per sq. ft.; Johnson-Shea Co., \$4,046.40; Ernest Frenzell, 10 1/4c. per sq. ft.

Stockton, Cal.—Board of Supervisors, Dec. 29, opened bids as follows for 13.8 miles of macadam roadway in the Manteo section of San Joaquin County: Clark & Henry Construction Co., city, \$97,846, and Cotton Bros. & Co., of Oakland, \$83,826.

Streator, Ill.—Board of Local Improvements has awarded contract for paving North Park st. to John S. Bauer, at \$19,000.

South Bend, Ind.—Bids were opened Dec. 31 for a brick pavement on Prairie ave., 30,922 sq. yds.—16,957 cu. yds. excav. and 8,260 ft. of curb; contract has been awarded to H. M. Barnes, city; paving will be of Barr block and cost about \$56,000.

Davenport, Ia.—Bids for paving seventeen streets and alleys were opened January 4. McCarthy Improvement Co. was the lowest bidder on all brick paving with exception of two alleys and will be awarded contract; Barber Asphalt Co. was lowest bidder on all asphalt paving, but it was stated that bids would probably be rejected because Barber Co. bid with only a five-year guarantee attached, while the specifications call for a seven-year guarantee. Following are bids:

Asphalt.
Franklin, from Marquette to Washington—McCarthy Improvement Co.: Excavation, 42c.; paving, \$1.84; curbing, 66c.

Barber Asphalt Co.: Excavation, 40c.; paving, \$1.70; curbing, 55c.

Union, from Marquette to Washington—McCarthy Improvement Co.: Excavation, 42c.; paving, \$1.84; curbing, 66c.

Barber Asphalt Co.: Excavation, 40c.; paving, \$1.70; curbing, 55c.

Mitchell, from Locust to Pleasant—McCarthy Improvement Co.: Excavation, 42c.; paving, \$1.86; curbing, 66c.

Barber Asphalt Co.: Excavation, 40c.; paving, \$1.70; curbing, 55c.

McCarthy Improvement Co.: Excavation, 42c.; paving, \$1.89; curbing, 66c.

Barber Asphalt Co.: Excavation, 40c.; paving, \$1.70; curbing, 55c.

Seventh, from Brady to Harrison—McCarthy Improvement Co.: Excavation, 40c.; paving, \$1.89; curbing, 66c.

Barber Asphalt Co.: Excavation, 40c.; paving, \$1.70; curbing, 55c.

Brick.

Twelfth, from Brady to Main—Independent Construction Co.: Excavation, 42c.; paving, \$1.71; curbing, 36c.

McCarthy Improvement Co.: Excavation, 40c.; paving, \$1.63; curbing, 35c.

Oak, from Second to Third—Independent Construction Co.: Excavation, 40c.; paving, \$1.70; curbing, 36c.

McCarthy Improvement Co.: Excavation, 40c.; paving, \$1.70; curbing, 35c.

Seventh, from Brady to Main—Independent Construction Co.: Excavation, 42c.; paving, \$1.70; curbing, 36c.

McCarthy Improvement Co.: Excavation, 40c.; paving, \$1.60; curbing, 35c.

Ninth, from Rock Island to Iowa—Independent Construction Co.: Excavation, 42c.; paving, \$1.71; curbing, 36c.

McCarthy Improvement Co.: Excavation, 42c.; paving, \$1.70; curbing, 35c.

Alley, Third, Fourth, Warren, Myrtle—Independent Construction Co.: Excavation, 41c.; paving, \$1.71.

McCarthy Improvement Co.: Excavation, 40c.; paving, \$1.55.

Alley, Harrison, Ripley—McCarthy Improvement Co.: Excavation, 40c.; paving, \$1.55.

Alley, Brown, Warren, Seventh, Eighth—Independent Construction Co.: Excavation, 44c.; paving, \$1.09.

Alley, Fourth, Fifth, Brown, Warren—Independent Construction Co.: Excavation, 40c.; paving, \$1.72.

McCarthy Improvement Co.: Excavation, 40c.; paving, \$1.55.

Ripley, from Eighth to Ninth—Independent Construction Co.: Excavation, 41c.; paving, \$1.71; curbing, 36c.

McCarthy Improvement Co.: Excavation, 40c.; paving, \$1.65; curbing, 35c.

Fulton ave., between Eastern and Jersey Ridge—Independent Construction Co.: Excavation, 42c.; paving, \$1.71; curbing, 36c.

McCarthy Improvement Co.: Excavation, 40c.; paving, \$1.62; curbing, 35c.

South, from Division to Davie—Independent Construction Co.: Excavation, 41c.; paving, \$1.72; curbing, 36c.

McCarthy Improvement Co.: Excavation, 40c.; paving, \$1.65; curbing, 35c.

Ripley, from Fifth, north—Independent Construction Co.: Excavation, 42c.; paving, \$1.70; curbing, 36c.

McCarthy Improvement Co.: Excavation, 40c.; paving, \$1.65; curbing, 35c.

Brown, from Third to Fifth—Independent Construction Co.: Excavation, 41c.; paving, \$1.70; curbing, 36c.

McCarthy Improvement Co.: Excavation, 40c.; paving, \$1.58; curbing, 35c.

Atlantic City, N. J.—Col. Frederick Gilkison, State Commissioner of Highways, has approved action of Atlantic County Freeholders in awarding a contract for an important connecting link in the ocean boulevard from Atlantic Highlands to Cape May; the contract covers a stretch of 12 miles from Toms River to Tuckahoe.

Buffalo, N. Y.—Following are lowest bids opened Dec. 24 by Francis G. Ward, Commissioner Public Works, for repaving a portion of N. Division st.: H. P. Burgard, 560 Walden ave., with asphalt, \$29,000, and F. V. E. Bardol, D. S. Morgan Bldg., with Medina stone, \$38,000, and brick, \$27,000.

Fulton, N. Y.—Board of Public Works, Dec. 30, awarded contract for paving portion of N. 1st st. to J. A. Fitch, city, for \$9,055.

New York, N. Y.—Following are the bids opened Dec. 29 by President of Bronx Borough for repaving with asphalt block on a concrete foundation Walker ave., West Farms road, from Unionport road to Westchester ave.—(a) Barber Asphalt Paving Co., \$113,918; (b) Hastings Pavt. Co., \$115,283; (c) Sicilian Asphalt Pavt. Co., \$147,000; 30,550 sq. yds. completed asphalt block pavt. and keeping same in repair for 5 years, (a) \$1.67, (b) \$1.62, (c) \$2.20; 6,500 cu. yds. concrete, including mortar bed, (a) \$5.50, (b) \$6, (c) \$6.20; 200 lin. ft. new curb, set in concrete, (a) 90c., (b) \$1, (c) \$1.10; 11,400 lin. ft. old curb, rejoined and reset in concrete, (a) 30c., (b) 28c., (c) 55c.; 15,000 sq. yds. of completed asphalt block pavt., not

to be kept in repair, (a) \$1.57, (b) \$1.56, (c) \$2.20.

Also for regulating, grading, etc., as follows: Bartholdi st.—Lowest bidder, Wakefield Constr. Co.: 2,650 cu. yds. earth excav., 40c.; 7,875 cu. yds. rock excav., \$1.45; 15,300 cu. yds. fill, 10c.; 3,060 lin. ft. new curb, 67c.; 11,650 sq. ft. new flag, 24c.; 1,910 sq. ft. new bridge stone for crosswalks, 50c.; 325 cu. yds. dry rubble masonry, \$1.25; 50 cu. yds. rubble masonry, in mortar, \$3.50; 125 lin. ft. vitr. stoneware pipe, 12-in. diam., 75c.; 430 lin. ft. vitr. stoneware pipe, 15-in. diam., \$1.50; 1,500 lin. ft. new guard rail, 15c.; three drainage inlets, type "A," \$30; seven drainage inlets, type "B," \$30; 5 cu. yds. brick masonry, \$15; 1,000 lb. c.-i. frames and covers, 3c.; total, \$21,760. Totals of other bids: Perillo & Shell, \$22,716; Voorhies, Sullivan Contr. Co., \$24,826; L. J. Moran, \$25,548; P. J. Duffy, \$25,340; J. B. Malatesta, \$21,923; and L. C. Rose, \$73,135.

Twenty-second st.—Lowest bidder, L. C. Rose, 737 E. 180th st.: 14,200 cu. yds. earth excav., 45c.; 4,000 cu. yds. rock excav., \$1.45; 4,725 lin. ft. new curb, 72c.; 18,750 sq. ft. new flag, 23c.; 1,450 sq. ft. new bridge stone for crosswalks, 70c.; 260 cu. yds. dry rubble masonry, in retaining walls, culverts and gutters, \$2; 25 cu. yds. rubble masonry, in mortar, \$5; 200 lin. ft. existing 6-in. pipe sewer, to be lowered, 50c.; two drainage inlets, type "A," each, \$60; 1,150 lin. ft. new guard rail, in place, 25c.; total, \$22,072.

Eden ave.—Lowest bidder, Voorhies, Sullivan Contr. Co., as follows: 2,450 cu. yds. earth excav., 50c.; 8,570 cu. yds. rock excav., \$1.50; 35,000 cu. yds. fill, 25c.; 3,080 lin. ft. new curb, 50c.; 12,150 sq. ft. new flag, 18c.; 1,810 sq. ft. new bridge stone for crosswalks, 30c.; 1,760 cu. yds. dry rubble masonry, in retaining walls, culverts and gutters, \$1.50; 50 lin. ft. vitr. stoneware pipe, 12-in. diam., \$1; 2,750 lin. ft. new guard rail in place, 5c.; total, \$29,927. Total of other bids: P. J. Duffy, \$33,162, and L. J. Moran, \$33,024.

Hastings Pavt. Co., 25 Broad st., has secured contract for grading and laying asphalt block pavement on Bronx and Pelham Parkway for \$90,576, bids opened by Park Department Dec. 16.

Winston-Salem, N. C.—Atlantic Bitulithic Co. has been awarded contract for 6,700 sq. yds. of bitulithic pavement.

Columbus, O.—Service Board has awarded contracts for paving as follows: Wm. H. Luchtenburg & Co., The Wyandotte, with Trimble block, Glenwood ave., \$32,472; Geigler & Gans, Centner ave., \$9,176; Budd & Bortling, 9th st., \$5,400; Harry J. Shaw, Outlook Bldg., Scioto st., \$9,896, and Wesley ave., \$5,870.

Woodsfield, O.—State Highway Department has let contract to Rosser & Maloney, Bellaire, at \$16,250, for paving with brick Woodsfield Western road in Monroe county. —Jas. C. Wonders, State Highway Commissioner, Columbus.

Harrisburg, Pa.—Four bidders submitted figures for the grading of North 2d st. from Woodbine to Division st., and the two lowest bidders were within \$200 of each other on a \$23,000 job. The bids were as follows: Estate of James McCormick, \$23,639.30; J. L. Shearer, Jr., \$23,861.50; United Ice & Coal Co., \$24,320, and the Stucker Bros. Construction Co., \$29,849. The grading work is practically all fill in and there are 63,895 cu. yds. of earth to be filled.

Johnstown, Pa.—Councils in joint session have adopted report of Committee appointed to tabulate street paving bids, awarded contracts to bidders recommended; contracts were awarded to the following bidders, with materials and prices mentioned.

Owing to Lowman st. being part of the street connecting with overhead bridge in Twelfth Ward, which will necessitate changes in said street, same has not been awarded. In case of Kelly alley, in the Fourteenth Ward, it was recommended that work be done by the Street Commissioner of the Third District:

Pader & Co.—Welsh alley, \$1.46, Toronto brick; Stonycreek st., \$1.56, Mack brick; Adair place, \$1.56, Toronto brick; Bausman alley, \$1.56, Toronto brick; Lardin alley, \$1.56, Toronto brick.

Charles H. Suppes, Jr.—Fend alley, \$1.51, Toronto brick; Wood alley, \$1.61, Toronto brick; Llewellyn st., \$1.64, Toronto brick; John st., \$1.41, Mack brick; Morrell place, \$1.44, Mack brick; Cover alley, \$1.50, Toronto brick; Baumer st., \$1.26, Mack brick; Poplar st., \$1.46, Toronto brick; Roxbury ave., \$1.78, Mack brick; Valley pike, \$1.44, Mack brick; Garden alley, \$1.56, Toronto brick.

John V. Best & Sons—Haynes st., \$1.40, Mack brick; Thomas ave., \$1.40, Mack brick; Kennedy ave., \$1.40, Mack brick; Akers st., \$1.45, Mack brick; Central ave., \$1.45, Mack brick; Fairfield ave., \$1.53, Mack brick; Strayer st., Nineteenth and Twentieth Wards, \$1.59, Mack brick.

James & Fulton—Morrell pl., \$1.43, Mack brick; Good alley, Second Ward, \$1.43, Mack

brick; Good alley, Third Ward, \$1.43, Mack brick; Sherman st., \$1.28, Mack brick; First alley, \$1.50, Mack brick; Pine st., \$1.39, Mack brick; Spruce st., \$1.31, Mack brick; Horner st., \$1.37, Mack brick; Ash st., \$1.41, Mack brick; Locust st., \$1.53, Mack brick; Feeder st., \$1.35, Mack brick; Huber st., \$1.40, Mack brick; Maple ave., \$1.35, Mack brick; Honan ave., \$1.64, Mack brick; Iron st., \$1.61, Mack brick.

E. A. Freshwater & Sons—Third ave., \$1.57, Toronto brick; Chestnut st., \$1.71, Toronto brick; Ohio st., \$1.66, Toronto brick; Barron ave., \$1.59, Toronto brick; Virginia ave., \$1.56, Toronto brick; Cooper ave., \$1.54, Toronto brick.

Cobblestone paving.—S. H. Killen, Huber st., 75c. per yd. John V. Best & Sons, Sarah alley, 50c. per yd. James & Fulton, Brinker alley, 50c. per yd.; Young alley, 50c. per yd.; New st., 33c. per yd.; Ebensburg road, 89c. per yd.

McKeesport, Pa.—Proposals to open the new extension of Coursin st. through the St. Joseph's cemetery were received by Street Committee of Councils, January 4; contracts went to Bowman Brothers Co., lowest bidders; bidding was so close that total cost of the improvement comes under City Engineer's estimate by \$1,705.90. Four firms bid on general improvement and five on erection of the iron fence; bids for general improvement, which consists of furnishing of all material, tools and labor for the grading, curbing, paving, construction of sewers, concrete sidewalks and concrete retaining walls, were received as follows: Bowman Brothers Co., \$13,200; Homestead Supply Co., \$14,475.32; P. Ancarna, \$13,450; James Nixon, of Clairton, \$14,693.45, and John W. Butler, \$16,000; in addition to this there is a provision in article of agreement which specifies that city shall have right to increase or decrease the size of retaining wall as shown by proposed plans and specifications; in event of a decrease the Bowman Brothers Co. is to allow the city credit of \$5 per cu. yd., and in case same is increased the city is to pay \$5 per cu. yd.; each bidder made this provision in his original proposal for the concrete work, the price per cu. yd. averaging \$5 to \$7.

Contract for iron fence, which also was awarded to Bowman Brothers Co. at its bid of \$2,096, is to furnish necessary labor, material, etc., for 1,155 ft. of 5-ft. fence, ½-in. square iron pickets, with 3 single and 2 double gates, and 575 ft. of 42-in. fence, ¾-in. square iron picket fence; other proposals received follow: Paul Stan Co., \$2,620; Taylor & Dean, of Pittsburg, \$3,099.55; Smith-Nimmo Co., \$2,129, and the Stewart Holland Co., \$2,300.90; latter company bid by the foot, Engineer figuring their bid as given.

Sumter, S. C.—J. D. McGee, Greenville, S. C., has been awarded contract for 4,000 sq. yds. cement sidewalks, 1 in. thick on 4-in. 1:2½:5 concrete base, at 89c. per yd., excavations included in bid, waste to be handled by city after being removed from sidewalk by contractor.—W. L. Lee, City Engineer.

Dallas, Tex.—Russell Realty Co. has awarded contract to Stubbs Paving Co., city, at about \$12,000, to construct 47,670 sq. ft. of 4-ft. sidewalks, with 11,917 lin. ft. curbs and gutters, in Winnetka Heights.

Ft. Worth, Tex.—Texas Bitulithic Co., city, has contract for bitulithic pavement on portions of Missouri and College aves.

Norfolk, Va.—Contract was awarded by Board of Control, January 5, to L. Lawson for curbing and guttering in 19th st., at 50c. per lin. ft. C. B. Schaffer was first engaged to do this work at same price, but failed to execute contract.

Puyallup, Wash.—Council has awarded contracts for paving three districts with bitulithic, to the Warren Construction Co.; the Barber Asphalt Paving Co., of Tacoma, and the F. W. Flom Co., of Portland, also submitted bids. The Warren company's bid for each of the three districts was \$2.19 per sq. yd.; its price for the first contract in Puyallup was \$2.40 per sq. yd. The bids submitted were as follows:

Central Pioneer ave. dist.: Bitulithic, \$39,979.61; asphalt, \$41,894.78; granitoid, \$44,205.38.

West Pioneer ave. dist.: Bitulithic, \$18,803.97; asphalt, \$17,328; granitoid, \$21,104.20.

Tacoma st. dist.: Bitulithic, \$6,349.18; asphalt, \$6,604.65; granitoid, \$7,136.18.

Despite the difference of \$1,400 in the asphalt and bitulithic bids in the West Pioneer avenue district, the Council awarded the contract to the Warren company. The price of the granitoid and bitulithic pavement per sq. yd. was \$2.45 and \$2.19 respectively, while that of the Barber people for asphalt fluctuated, one district being \$2.44, another \$1.25 and the other \$2.22.

Spokane, Wash.—Board of Public Works Dec. 20 awarded contract for grading and constructing sidewalks on portion of Bernard st. to Naylor & Narlin, at \$15,390.

SEWERAGE

Morrilton, Ark.—Board of Commissioners, Improvement District No. 1, has organized for the purpose of constructing sewer system and is arranging to float bonds necessary to secure the funds necessary to pay for the work; cost is estimated at about \$21,000. Board is composed of Judge W. L. Moose, M. A. Metzger and A. J. Stephens.

Berkeley, Cal.—City Engineer J. J. Jessup is preparing plans and specifications for improvements to sewer system which will cost about \$500,000, and to approve which the voters will decide by a bond issue.

East San José, Cal.—Board of Trustees is considering \$4,000 appropriation for purchase of site for septic tank.

Greeley, Col.—Council has ordered extension of sewer system.

Ansonia, Conn.—Plans are being prepared for construction of sewerage system to embrace the entire city.—T. B. Clark, City Engineer.

Kissimmee, Fla.—City will vote on \$50,000 bonds for construction of sewer system and water works.—Xavier A. Kramer, Magnolia, Miss, Engineer.

Dublin, Ga.—City has decided to extend sewer system to West Dublin.

Elgin, Ill.—Board of Local Improvements has passed ordinance for system of sewers in Bluff City blvd. and other streets.—Carl E. Plum, City Engineer.

Sterling, Ill.—City Engineer J. D'Arcy has been instructed to prepare plans and the estimate of cost of proposed extension of the sewer system on Dixon ave.

Winnetka, Ill.—City did not let contract for constructing sewers and drains.—S. H. Greeley, President Board of Local Improvements; Windes & Marsh, Village Engineers.

Vincennes, Ind.—Mayor Jas. D. McDowell is favorable to installation of sewer system.

Boone, Ia.—Council has ordered construction of system of sanitary sewers in Fifth Ward, which will comprise about 9 1-3 miles of from 8-in. to 15-in. mains of vit. sewer pipe; bids for same will be received Jan. 26.—Karl C. Kastberg, City Engineer.

Dubuque, Ia.—Plans are being prepared by City Engineer Paul Ilg for 14-ft. arch brick, concrete or reinforced concrete storm sewer extension at Bee Branch; cost \$9,000; bids will be asked in spring.—J. W. Lawlor, City Clerk.

Webster, Ia.—Council is planning construction of sewer along alley of 2d st., from 3d st. to river.

Hutchinson, Kan.—City proposes to expend about \$10,000 in extension of sewer, water and gas mains.

Westbrook, Me.—Mayor Hay has recommended extensions to sewer system.

Berlin, Md.—Residents of town are making arrangements to ask Mayor and City Council for charter to lay sewer pipes.

Greenfield, Mass.—Plans are being prepared for proposed new intercepting sewer at estimated cost of from \$40,000 to \$50,000.—William S. Johnson, 101 Tremont st., Boston, Mass., Consulting Engineer; Geo. F. Merrill, Greenfield, Mass., Chairman of Committee appointed to investigate sewage disposal.

New Bedford, Mass.—Mayor C. S. Ashley has recommended immediate consideration of general sewerage problem with reference to abatement of nuisance in Clarks Cove.

Taunton, Mass.—Mayor W. S. Woods has recommended \$15,000 appropriation for extending sewer system.

Detroit, Mich.—City has awarded \$149,000 sewer bonds to Detroit Sinking Fund Commission.

Muskegon, Mich.—City Clerk is advertising for bids for the extension of sewer system in the city; work was left unfinished by contractor.

Morris, Minn.—Plans are being prepared by City Engineer Cole for installation of surface drainage system of 30-in. cement tile.

Columbia, Mo.—City will construct sewer system; cost \$50,000; bids will be opened about Jan. 15.—D. B. Duncan, City Engineer.

St. Louis, Mo.—Council has passed ordinances for constructing sewer in Ohio Ave. Sewer District No. 25 and Glaise Creek Sewer District No. 3.

Havelock, Neb.—Plans have been prepared by Civil Engineer Grant, Lincoln, for sewer and water plant.

Dunellen, N. J.—Mayor W. A. Sanford has recommended proper sanitary conditions.

East Orange, N. J.—Bids will be received in February for construction of sewers on Main st.; cost about \$33,000.—Frederic A. Reimer, City Engineer.

Morristown, N. J.—Mayor Theodore Ayers has recommended \$17,420 appropriation for sewers.

Orange, N. J.—Council has finally passed ordinances for sewers in East Highland and Sterling aves.

Roselle, N. J.—Mayor Chas. MacQuoid has recommended construction of sewers in Aldene and Lorraine Districts.

Roselle Park, N. J.—Citizens will vote Jan 25 on \$54,000 bonds for extension of sewer system.—A. M. Woodruff, Borough Clerk.

South Orange, N. J.—Township Committee is considering laying of sewer laterals in three streets.

Trenton, N. J.—Health Board has asked for construction of sewer in South Broad st. crossing Assumpink Creek.

Trenton, N. J.—Board of Park Commissioners is considering plans for modern sewer system as drawn by City Engineer Swan.

Washington, N. J.—Council is considering issuance of \$60,000 bonds for construction of sewer system.

Westfield, N. J.—Council has received petition for sewer in Washington st.

Binghamton, N. Y.—Construction of storm water sewer, cost \$1,500, on Main st., is being considered.

Elmira, N. Y.—Mayor Sheehan has recommended extension of sewage system.

Newburgh, N. Y.—Board of Health has recommended construction of 12-in. cement sewer pipe in 3d st.

Rochester, N. Y.—Waterloo, Seneca County, may issue \$100,000 bonds for construction of a sewer and a disposal plant, according to decision by Supreme Court Justice Sutherland.—John Kopf, Village President.

Syracuse, N. Y.—City will construct large sewer in East Colvin this year.

Troy, N. Y.—City Engineer Grimes has estimated cost of constructing sewer on Spring ave. at \$8,839.

Cincinnati, O.—Council has asked for estimates for construction of sewers in Northside ave. and other streets.

Cincinnati, O.—County Commissioners are considering building of trunk sewer in Mill Creek.

Dayton, O.—City will expend \$20,600 in sewer improvements during year.

Dayton, O.—Council has decided to sell \$9,000 bonds for construction of Haynes st. system of storm water sewer.—C. P. Floyd, Clerk.

Greenville, O.—Council has authorized Board of Control to employ an engineer to prepare plans and specifications for sanitary sewage disposal plant.

Mansfield, O.—Residents of Hammond ave. have asked for construction of sewer.

Chandler, Okla.—Council has decided to construct lateral storm sewers in 5th and 9th sts.

Weatherford, Okla.—City will receive bids Jan. 28, 2 p. m., for construction of concrete septic tank of about 4,000 gal. capacity; two sand filter beds, 60 ft. x 100 ft. x 3 ft. 3 in.; 32,450 ft. of 6-in., 9,400 ft. of 8-in., 7,770 ft. of 10-in., 4,770 ft. of 12-in., and 1,450 ft. of sewers of first quality pipes with manholes, etc.; also construction of water mains, wells, etc.—W. K. Cunningham, City Clerk; J. L. O'Hearn, Clinton, Consulting Engineer.

Portland, Ore.—City will construct branches to Brooklyn District sewer; cost \$1,000,000; sewers are being planned for Peninsula District at cost of \$1,000,000.

Jenkintown, Pa.—State Department of Health has urged city to consider installation of system of intercepting sewerage and sewage disposal.

Lebanon, Pa.—Mayor G. B. Marquart has recommended plan for house sewerage.

Philadelphia, Pa.—Bids will be received by Board of Public Works for construction of branch sewer in 10th st. and Chelton ave., 3-ft. 6-in. circular brick, with inlets and connections.—G. R. Stearns, Director.

Philadelphia, Pa.—Council is considering construction of sewers in Forty-second and Forty-sixth Wards.

Williamsport, Pa.—Mayor Chas. D. Wolfe has urged Council to seek State aid in attempt to solve sewage disposal problem.

Columbia, S. C.—Street Committee has authorized construction of storm sewer on Cherokee st.; cost \$2,661.

Dallas, Tex.—City Secretary will advertise for bids for laying 6-in. sanitary sewer in Block 209.

Galveston, Tex.—City Commission has authorized extension of sewer lateral across 30th st.—A. T. Dickey, City Engineer.

Palestine, Tex.—Manager V. D. Wilson of Palestine Sewer Co. and City Commissioners have reached agreement whereby sewer company will extend its service to include northern part of city.

Norfolk, Va.—Councils have adopted ordinances appropriating \$14,300 for extension of sewers and water mains in Greater Ghent section.

Hoquiam, Wash.—Bids will be received in February for pipe and concrete sewers; cost about \$75,000.—J. D. Monghmer, City Engineer.

Hoquiam, Wash.—City Engineer Thomson, Seattle, will soon make a report on plans for proposed K st. trunk sewer sys-

tem for city, submitted to him at request of Council by City Engineer Moughmar.

Monroe, Wash.—Engineer Colburn has prepared plans for trunk sewer.

North Yakima, Wash.—City has rejected all bids for sewer work.

BIDS RECEIVED AND CONTRACTS AWARDED

Belleville, Ill.—Hoeffken Bros. have been awarded contract for constructing 3,343 ft. of sewer from the County Farm for \$3,296; the Stoltz Supply Co. bid \$3,276, with \$4.53 per cu. yd. for all rock encountered; Keeb Bros. bid \$3,362.60.

Mishawaka, Ind.—The Committee on Sewers and Drains has found that the bid of Staples & Ackerman for the construction of a sewer on Niles ave., Homewood ave. and Washington st. was the lowest and best and awarded contract.

Storm Lake, Ia.—Contract for constructing sewers, bids opened Dec. 28, has been awarded as follows: To Lytle Contr. Co., Sioux City, for 31,000 ft. 8, 10, 12 and 15-in. sewer, \$31,403, and to Cook Contr. Co., Des Moines, for septic tank, filter areas and 1,612 ft. 15-in. sewer, \$9,489.—J. H. La Grange, City Clerk.

Louisville, Ky.—Bids were opened by the Commissioners of Sewerage Dec. 24 for construction of Zane st. sewer, and lowest and successful bid was submitted by C. T. McCracken & Co., of Columbus, O., as follows: 3,456 lin. ft. earth excav., \$1.50 to \$2.70; 1,300 cu. yds. rock excav., \$6; 250 cu. yds. class A concrete, \$12; 460 cu. yds. class C concrete, \$10; 250 sq. yds. vitr. brick paving, \$3; 30 cu. yds. brick masry., \$15; 20 cu. yds. ex. below masry., \$3; 20 cu. yds. gravel re-fill, \$3; vitr. pipe and fittings, \$3.11; 1,175 lin. ft. pipe laying, 35c.; cleaning up, lump sum, \$300; total, \$30,113. Total of other bids: E. A. Barker & Son, Louisville, \$34,182, and H. Bickel Co., Louisville, \$45,884.

Joplin, Mo.—Contract for construction of West Joplin sanitary sewer has been let by Council Dec. 28 to Henry Kost, city, at \$36,852.—J. B. Hodgdon, City Engineer.

Pert, Amboy, N. J.—Johan Jensen has been awarded contract for constructing a 15-in. pipe sewer in Hall ave.; the bidders were as follows: Martin Hansen, Johan Jensen and Meagher & Smith, city, and L. Jacques, of Elizabeth.

Sea Girt, N. J.—Following is detail of bid of B. F. Sweeten & Co., Camden, successful bidder for installing sewer system at State Camp grounds: 2,210 ft. c.-i. sewer pipe, 8-in., \$1.17; 13 manholes, each, \$20; 1,680 ft. vitr. pipe sewer, 8-in., 70c.; 500 ft. 8-in. c.-i. pipe Ward joints, \$2.60; 1,080 ft. 2½-in. wrought iron air line, 50c.; intercepting and ejector chamber, \$35.75; two 100-gal. Shone ejectors, complete, \$1,900; total, \$11,337.

New York, N. Y.—Bids were received as follows Dec. 30 by Department of Parks for construction of brick drain in Van Cortlandt Park: W. J. Brennan, \$87,382; Rodgers & Haggerty, \$91,802; Henry E. Fox, \$86,610; Marrone & Gasperini, \$95,335; D. Bonnocci, \$94,277; Louis Wechsler, \$94,690; Joseph More, \$97,421; Thomas Crimmins, \$102,580; Briggs & McLaughlin, \$89,431; Ryan & Reilly, \$83,215; C. W. Collins, \$91,003; Hanover Contracting Co., \$96,272; McHarg-Barton Co., 165 Broadway New York, \$84,193.

Sebring, O.—The contract for a sewage disposal plant has been awarded to John Skeele, of Canton, his being the lowest of eight bids, at \$11,959.08.

Arnold, Pa.—Council received bids for sewerage 15th st. and Ivy alley, as follows: Ridge Bros., Pittsburg, 12-in. pipe at 80c. per ft., 15-in., \$1.10; manholes, \$25 each; Duster Contractor's Co., Tarentum, 12-in., 67c.; 15-in., 75c.; manholes, \$29.50; Souders' Contracting Co., 12-in., 78c.; 15-in., 86c.; manholes, \$30; Mike Lancelot, New Kensington, 12-in., 53c.; 15-in., 73c.; manholes, \$21.

Providence, R. I.—Board of Contract and Supply has awarded contracts for sewer pipe to William A. Harris, Jr., and C. M. Kelly; estimated cost, \$6,097.

Houston, Tex.—Bids were opened Dec. 13 for construction of sanitary sewers in Fifth Ward, to consist of 3,065 lin. ft. 30-in., 2,850 lin. ft. 24-in., 1,375 lin. ft. 20-in., 11,151 lin. ft. 15-in., 1,552 lin. ft. 12-in. and 1,450 lin. ft. 10-in. vitr. pipe, and contract has been awarded to Kelso & Vautrin, Galveston, for \$72,726. Other bids received were: T. J. Shea, New Orleans, \$77,090; Truelheart & Jackson, San Antonio, \$77,152; J. W. Maxcy Co., Houston, \$77,324; J. W. Gurley, Mobile, \$77,330; W. W. Cook & Son, Junction City, Kan., \$80,653; J. C. Underwood, Houston, \$87,847, and Texas Grading Co., Houston, \$98,569.

Dunnville, Ont., Can.—Contract for constructing about 18,300 ft. of tile sewers, contractor to furnish all materials, has been awarded to Excelsior Construction & Paving Co., Ltd., Yonge St. Arcade, Toronto, at \$15,073; details of bid were given Dec. 29.—Willis Chipman, 103 Bay st., Toronto, Chief Engineer.

WATER SUPPLY

Bessemer, Ala.—City has obligated itself to purchase water works plant owned by Bessemer Water Works Co.

Gadsden, Ala.—Superintendent of Water Works has recommended \$75,000 expenditure for rebuilding water works.

Montgomery, Ala.—City is considering construction of one, and maybe two, reservoirs with capacity of about 2,000,000 gallons each to increase water supply in addition to installation of pumps.—Gaston Gunter, Mayor.

Samson, Ala.—City Engineer has been inspecting the water power at falls on Double Bridges Creek, with view of erecting power plant to supply city and surrounding towns with water and light.

El Centro, Cal.—City Trustees have selected A. L. Sonderegger, Central Bldg., Los Angeles, to prepare plans for water works.

Pasadena, Cal.—Citizens will vote Jan. 26 on \$1,200,000 water bonds.

San Diego, Cal.—Estimates have been prepared by City Engineer E. M. Capps for construction of 14-in. concrete pipe line; cost about \$2,600.

San Jacinto, Cal.—Government will install electric lighting plant on Indian reservation at Soboba.

Canon City, Col.—South Canon has entered into arrangement with G. R. Gwillim, city, for construction of system of water works; money for the building of the system has been furnished by Thomas C. Pease of Colorado Springs, who, with Gwillim, outlined the plans; franchise has been granted; work will begin within thirty days. Water will be piped from three artesian wells at Chandler, seven miles south; reservoir will be constructed and all streets piped; cost, \$50,000.

Kissimmee, Fla.—Citizens will vote on \$50,000 bonds for construction of water works and sewer system.—Xavier A. Kramer, Magnolia, Miss., Engineer.

Boise Barracks, Ida.—War Department has granted \$40,000 appropriation to Capt. Ryan, Constructing Quartermaster, for securing additional water supply.

Decatur, Ill.—Progressive Light & Power Co. has been incorporated to furnish power for electric lighting. Incorporators are: William H. Saffern, Robert I. Hunt and Fred M. Ives.

De Kalb, Ill.—City is considering installation of pumping plant; cost \$6,000.

Pekin, Ill.—Laying of water mains on South Capitol st. is being considered.

Rockford, Ill.—City Water Works Committee is considering installation of large water mains throughout city.

Vermont, Ill.—Town has issued bonds for installation of water works system.

Aplington, Ia.—Citizens are urging installation of water works system.

Bellevue, Ia.—Municipal water works and light plant has been destroyed by fire; loss \$6,000.

Corydon, Ia.—Election on bonds for construction of water works system is being considered.

Dubuque, Ia.—The city will make a number of water main extensions.—B. F. Stedman, Superintendent.

Waterloo, Ia.—Citizens have voted to purchase water works plant and make extensions.

Topeka, Kan.—Plans will be completed in February or March for proposed well, to cost about \$4,000.

Louisville, Ky.—Board of Water Works has been authorized to lay 24-in. distributing main from Crescent Hill to Baxter and Finzer aves.—Theodore A. Lelsen, Chief Engineer and Superintendent.

Pittsfield, Mass.—Mayor W. H. MacInnis has recommended better water supply.

Taunton, Mass.—Mayor W. S. Woods has recommended metering of all city water.

Pontiac, Mich.—Common Council voted to spend \$82,000 in improving and extending water works system; city has called for contracts for a supply of water pipe.

Duluth, Minn.—Citizens will vote in February on \$200,000 water and light bonds.

Lewiston, Miss.—City is considering construction of water works and sewerage system.

Mathiston, Miss.—Council has passed resolution authorizing issuance of \$20,000 water works bonds.

Huntsville, Mo.—Citizens will soon vote bonds to install water works and purchase electric light plant.

Lamar, Mo.—Plans have been prepared for setting about 15 new hydrants and 5,400 ft. of mains.

Bassett, Neb.—Citizens will vote on water works system.

Beatrice, Neb.—City has engaged W. K. Palmer, Engineer, Kansas City, Mo., to prepare estimate of cost of revising water plant to enable city to use water from wells north of city.

North Platte, Neb.—Bids will be called

for in about 40 days for the proposed water works; cost about \$100,000.—Hershey S. Welch, Engineer; C. F. Temple, City Clerk.

Perth Amboy, N. J.—Mayor T. J. Scully has recommended extension of 8-in. water mains to portion of city between Maxville and Christ Church Cemetery.

Plainfield, N. J.—Fire Chief T. O. Doane has recommended higher water pressure.

Hornell, N. Y.—Board of Public Works is preparing plans for storage reservoir.—A. F. Bannon, Jr., Superintendent.

Schenectady, N. Y.—Commissioner of Public Works Emmett, on retiring, recommended metering of water supply and erection of additional standpipe.

Shortsville, N. Y.—Proposition to spend \$26,000 for a water system is being considered.

Syracuse, N. Y.—Water Department is planning laying of 4 miles of water mains.—G. H. Beebe, Superintendent.

Syracuse, N. Y.—N. W. Harris & Co., New York, have secured \$100,000 water extension bonds for \$101,435.

Cincinnati, O.—Water Works Commissioners have decided to receive bids Jan. 19, for erection of electric automatic pumping station on Clifton Heights, together with a 40,000-gallon standpipe.

Covington, O.—Police and Fire Commissioners have asked for more fire cisterns.

Marion, O.—State Inspector has recommended that the water works be brought up to date in every way, and improvements made that will bring it up to the level needed by city of this population.

Ardmore, Okla.—Mayor Cotner has announced that engineer would be brought to city to pass upon proposed moving of pumping station; new pumps may have to be purchased.—H. H. Sayre, City Engineer.

Foss, Okla.—Citizens have voted \$29,000 bonds for construction of water works system.

Ralston, Okla.—City is considering \$26,000 expenditure on water works plant.

Tishomingo, Okla.—City is considering installation of filter plant.

Weatherford, Okla.—Bids will be received Jan. 28, 2 p. m., for construction of water works standpipe 24 ft. diam. x 40 high, one, 18 ft. x 6 ft. high pressure boiler, return tubular, full flush front, an air lift pumping system for five wells, one duplex force pump of about 900,000 gals. capacity, 36,000 ft. different size water mains with valves, etc.; also construction of concrete septic tank.—W. K. Cunningham, City Clerk; J. L. O'Hearn, Clinton, Consulting Engineer.

Portland, Ore.—City is considering laying of large trunk water mains and scores of laterals; cost \$1,000,000.

Lebanon, Pa.—Mayor G. B. Marquart has recommended improvement and extension of water system.

Lebanon, Pa.—Board of Water Commissioners has recommended new dam or impounding reservoir in ravine at South Mountain; terra cotta conduit instead of open channel to carry water from dam No. 3 to dam No. 1; also control of entire South Mountain watershed.

Lewisburg, Pa.—Council is taking steps to secure water plant to be owned by the borough; committee that examined the source of supply found two mountain streams with sufficient elevation to supply borough and its inhabitants at all times with good water; cost of entire plant will be \$75,000.

Davis, S. D.—Construction of municipal water works system is being considered.

Jellico, Tenn.—Citizens have voted water works bonds.

Knoxville, Tenn.—Knoxville Water Commission has ordered six extensions of water mains.

Mt. Pleasant, Tenn.—Bids will be received Feb. 1, 8 p. m., by Mayor and Board of Aldermen, for purchase of \$55,000 water works bonds for construction of a gravity system of water works for town.—W. H. Long, Mayor.

Dallas, Tex.—Plans and specifications have been approved by Board of Municipal Commissioners for erection of dam at White Rock reservoir site.

Graham, Tex.—City will install filtering plant for city water; cost \$5,000.

Ogden, Utah.—City Engineer has reported that 24-in. water main could be constructed in Cold Water Canyon for \$41,750.

Salt Lake City, Utah.—Engineering and Sewer Commission of Council has approved plans of Geo. O. Chaney, City Engineer, for city creek aqueduct and catch-basin; cost \$24,000; aqueduct will be of cement and run from the east side of State st. up City Creek, distance about 2,000 ft.

Norfolk, Va.—Controller Purdie has reported that it is entirely practicable to filter present water supply through natural strata of ground.

Norfolk, Va.—Councils have adopted ordinance appropriating \$14,230 for extension of water mains and sewers in Greater Ghent section.

Suffolk, Va.—Village of Holland has been

destroyed by fire; lack of water supply and fire apparatus.

Issaquah, Wash.—Purchase of water works, or construction of new system, is being considered.

Lander, Wyo.—City will extend water system; \$25,000 available.—E. W. Hainsworth, Town Clerk.

Bangkok, Siam.—Bids will be received by Minister of Local Government, Bangkok, for supply of c. l. pipe and accessories for the water supply of Bangkok. Specifications with forms of tender and contract may be obtained on application to Secretary of Siamese Legation at Washington, D. C., on payment of \$1.25.

BIDS RECEIVED AND CONTRACTS AWARDED

Fayetteville, Ark.—Board of Control has awarded contract to C. D. McIlroy, city, at \$26,445, to construct auxiliary supply pipe line; water is to be piped from Clear Creek, which has flow of about 1,000,000 gallons daily.

Los Angeles, Cal.—Following bids were received Dec. 20 by Board of Public Works for constructing two steel siphons for the Owen's River aqueduct: Lacy Mfg. Co., \$22,315; Baker Iron Works, \$25,950; Llewellyn Iron Works, \$28,000, all of Los Angeles.

Washington, D. C.—District Commissioners Dec. 23 awarded contract to Thomson Meter Co., 100 Bridge st., Brooklyn, N. Y., for 1,000 ½-in. Lambert meters, with the privilege of increasing order 100 per cent should Department so desire.

Chicopee, Mass.—Commissioners Dec. 31 awarded contract for the pump for the Fairview water works to Hannon & Fenton Co.—C. E. Bogardus, Superintendent.

Pontiac, Mich.—Board of Public Works has awarded contract for 1,117 tons of c.-l. water pipe to the U. S. Cast Iron Pipe & Foundry Co., 217 LaSalle st., Chicago, at the following prices per ton: 4-in. pipe, \$26; all sizes over 4-in., \$25.50; pipe is to be used for water extensions.

Minneapolis, Minn.—Water Works Committee has awarded contract for 3,000 tons of c.-l. pipe for use during year to the Sheffield Cast Iron Pipe & Fdry. Co., of Sheffield, Ala., at \$26.50 a ton, and 100 tons special castings to the Crown Iron Works, city, at \$53.50 a ton.

Atlantic City, N. J.—Atlantic Construction Co. has been awarded contract for construction of concrete tank at the water works, to be used as reservoir.

Brooklyn, N. Y.—Following are bids opened Dec. 31 by Commissioners of Water Supply, Gas and Electricity, for furnishing, delivering and laying water mains and appurtenances and removing existing water mains in Bushwick, Lewis, Lexington, Reid and Stuyvesant aves., and in Beaver st., Borough of Brooklyn: H. E. Fox, 80 E. 125th st., New York City, \$116,283; D. Bouacel, Brooklyn, \$122,391; J. J. Hagerty, 41 Park Row, New York City, \$133,099; Jas. Kelly, 41 Park Row, New York City, \$133,856; Robt. Carter Co., Brooklyn, \$123,073; Newman & Carey, Brooklyn, \$123,810; J. H. Holmes, Brooklyn, \$116,848; Empire City Contr. Co., \$119,829; also for furnishing, delivering and laying water mains in Southern blvd. and in 133d st.: L. D. Gregory, 345 E. 125th st., \$101,829; Sorace Contr. Co., 170 Broadway, \$108,787; Milton Constr. Co., 115 Elliott ave., \$125,315; H. E. Fox, 80 E. 125th st., \$122,237; O'Leary & Flanagan, 245 E. 203d st., \$118,715; Melrose Constr. Co., 147 E. 125th st., \$118,202.

East Liverpool, O.—The Sand & Gravel Co., city, has secured contract for constructing system of mechanical filters, reinforced concrete subsiding basin, laying c.-l. water pipe and constructing filter house, for about \$59,963, bids opened Dec. 1.—John W. Hill & Son, 506 First Natl. Bank Bldg., Cincinnati, Engineers.

Euclid, O.—Contract for laying water mains along Euclid ave., bids opened Dec. 27, has been awarded to the Water Works, Sewer & Paving Constr. Co., 723 Citizens Bldg., Cleveland, O., for \$33,713.—Nelson J. Brewer, City Clerk.

Catasauqua, Pa.—Geo. H. Hardner Allentown, has secured contract for construction of municipal water works for about \$80,000.—G. C. Morgan & Co., Chicago, Ill., Engineers.

Spokane, Wash.—Suit has been started in the Superior Court by representatives of the Moran Engineering Co., of Seattle, to enjoin the city and the Board of Public Works from closing a contract for pumps and motors to be installed at the upriver station with the Allis-Chalmers Co., of Milwaukee; the bid of the Coast company for the machinery was \$33,776, nearly \$1,000 lower than the Wisconsin competitor, whose bid was accepted. The manner of opening the original bids was irregular, it is said, and, under protest of the bidders, new bids were demanded. The result in the second instance was the same, the Seattle company

being lower than the Wisconsin company, which was awarded the contract.

Vancouver, Wash.—Contract for water system for the State School for Deaf has been awarded to D. F. Doherty, city, for \$2,400.

Kimball, W. Va.—L. Kaufman, of Norfolk, has secured contract for constructing water works and an electric light plant; cost, \$100,000.—J. S. Shaw, Algoma, Engineer.

Racine, Wis.—Contract for a steel tank to be installed at the Racine County Insane Asylum has been awarded by the Board of Supervisors to the Chicago Bridge & Iron Co., for \$4,075; the specifications call for a tank with a capacity of 50,000 gallons, to be erected upon steel superstructure 125 ft. high; as the tank itself will be 19 ft. in height, the total height of the structure will be 144 ft.; the tank will be built entirely of steel of a thickness of 1/4-in., with special reinforced bottom.

LIGHTING AND POWER

Florence, Ala.—Attorney Thurston H. Allen has asked for 30-year franchise for proposed gas company.

Imboden, Ark.—Dr. E. W. Sullivan has purchased electric light and water plant of the Imboden Power & Development Co. and will make improvements to same.

Alameda, Cal.—President Wynn Meredith of the Board of Electric Light Commissioners is advocating construction of a fireproof concrete building to house city's electric light plant; building will cost \$20,000.

Merced, Cal.—Merced Falls Gas & Electric Co. is preparing to erect substation on 15th st. of concrete with a steel frame.—H. H. Adams, Superintendent.

Oakland, Cal.—People's Electric Light & Power Co. has been incorporated with a capital of \$500,000 by D. U. Toffelmeyer, of San Leandro, and J. H. Horning, city, for purpose of local distribution of light and power.

Redwood City, Cal.—Attorney Archer Kincald on behalf of Benjamin Cunha has presented petition asking for sale of franchise for installing and maintaining electric lights in Miramar, Halfmoon Bay and Purisima school districts.

Canaan, Conn.—Plans are being considered by Berkshire Power Co. for construction of an addition to power plant on Housatonic River; company will install an auxiliary steam plant to supplement its water power.—H. Lyles, Secretary and General Manager.

New Haven, Conn.—New England Engineering Co. is preparing plans for power plant for New Haven Hospital.

Washington, D. C.—An American Consul in Latin America has reported that a concession for development of water power in his district has been granted to an American firm with a capital of \$5,000,000; company will build a series of dams on local river to impound water for the development of hydro-electric power to be transmitted to numerous mines located in the surrounding territory.—Address No. 4331, Bureau of Manufactures.

Cordele, Ga.—H. S. Marshall of Illinois, D. G. Zeiger of Jacksonville, Fla., and G. W. Hatcher, city, have applied for charter to construct water power development plant on the Flint River.

Willacoochee, Ga.—City is considering installation of light system.—J. E. Gaskins, Mayor.

Dundee, Ill.—West Dundee Board has granted franchise for delivery of electricity to Illinois Lakes Light, Heat & Power Co. to April 6, 1922, and contract entered into with it for lighting streets until Nov. 15, 1912.

Evansville, Ind.—B. T. Gifford, of Central Station Engineering Co., Chicago, has submitted to Board of Public Works working drafts of plans for underground and overhead systems of Evansville Public Service Co., which will erect central heating plant and electric power house.

Hammond, Ind.—Board of Public Works has rejected bids for city lighting submitted by Northern Indiana Gas & Electric Co., the South Shore Electric Railway Co. and electric company of Hammond capital; bids were too complicated; Board believes by readvertising it will receive better bids.

Richmond, Ind.—Council is considering granting of franchise to Richmond Natural Gas Co.

Bellevue, Ia.—Municipal light and water works plant has been destroyed by fire; loss \$6,000.

Hutchinson, Kan.—City proposes to expend about \$10,000 in extension of gas, water and sewer mains.

Topeka, Kan.—Council has decided to bring legal proceedings against Consumers' Light, Heat & Power Co. to compel gas people to furnish Topeka with more gas or give the reason why and to inspect and repair the gas mains in this city.

Louisville, Ky.—Louisville Lighting Co. will provide for expenditure of \$1,500,000 for future enlargement and improvement of facilities; will expend \$200,000 for new machinery in plant at Broadway and 14th st.—F. M. Sackett, President.

Clinton, La.—Board of Mayor and Aldermen authorized purchase of Clinton Oil Mill Co.'s electric light plant and will employ electrical engineer to superintend removal and erection of machinery in new building near present location.—John Levy, Mayor.

Hammond, La.—Hammond Ice, Light & Bottling Works will purchase 60-h. p. center-crank horizontal automatic engine of standard make for electric generating; second-hand preferred.

Salisbury, Md.—Sussex Light & Power Co. has been incorporated with \$50,000 capital stock by William H. Cooper, Elizabeth D. Cooper, Jesse D. Price and Mark Cooper.

Boston, Mass.—School Committee is considering matter of installing lighting plant for city schools.

West Boylston, Mass.—Citizens have voted to build municipal electric light plant; electricity will be purchased from the Connecticut Light & Power Co.; \$15,000 has been voted to provide for 12 miles of construction and 165 lights.

Duluth, Minn.—Citizens will vote in February on \$200,000 light and water bonds.

Maryville, Mo.—C. C. Hellmers, manager of Maryville Electric Light & Power Co., will install 250-h. p. water tube boiler during spring.

Hamilton, Mont.—Hamilton Light & Water Co. has decided to construct new power plant on Sleeping Child Creek; cost about \$150,000.

Fremont, Neb.—Fremont Gas & Electric Light Co. has decided to expend about \$25,000 for improvements during year.

Omaha, Neb.—Street Railway Co. will soon construct power plant at 5th and Jackson sts.; cost \$1,000,000.

Bloomfield, N. J.—Mayor Sutphen has recommended purchase of electric light and power equipment of Public Service Co., now supplying town, and use it to convey current obtained from some municipal plant.

Orange, N. J.—Council has introduced ordinance providing for issuance of \$90,000 bonds to cover cost of installing municipal lighting system.

Westfield, N. J.—Mayor Alpers has recommended extension of street lighting service.

Minerville, N. Y.—Public Service Commission, Second District, has granted permission to Minerville Light, Heat & Power Co. to exercise franchise granted by the town of Moriah, to operate in Minerville and Witherbee, and to issue \$10,000 of capital stock, sum of \$3,634 to be used for purchase of an electric light plant and the remainder for extensions and improvements to plant.

Sylvan Beach, N. Y.—Board of Trustees is considering installation of electric light plant here, having an output capable of furnishing electricity for 1,000 lamps of 16 c.p.; plant will be driven by a gasoline engine.—E. J. Brown, Clerk.

Valley City, N. D.—North Dakota Heat & Power Co., Fargo, has decided to apply for contract to furnish current for electric light plant.

Cleveland, O.—Cuyahoga Light Co. will expend about \$1,000,000 in improvements.—L. D. West, City Superintendent.

Oxford, O.—Mayor A. F. Sloane has recommended levy for street lighting purposes.

Altus, Okla.—Citizens will vote about Feb. 1 bonds for improvements to municipal electric light and power plant.—M. A. Snyder, Superintendent.

Tishomingo, Okla.—City is considering installation of electric plant to supply light, power and heat; water power; 1,000 to 1,200 incandescent or 15 arc lights; about 15 miles of wire.—W. H. Bingham, President Board of Trustees.

Portland, Ore.—Portland Light & Power Co. will extend its Broadway line.

Chester, Pa.—Light Committee has reported that matter of employing expert to test lights of the city had been left in hands of Chairman to make inquiries as to cost of experts and report back to Committee.

Holsopple, Pa.—The White Oak Light, Heat & Power Co. has been chartered. Joseph Cauffel, of Johnstown; C. C. Zimmermann, Emanuel Eash, Hiram W. Lint, Mahlon Kelm, Aaron Miller and William Baer, all of Holsopple; Daniel Yoder, H. J. Spangy, Charles Naugle and Joseph Naugle are interested.

Pittsburg, Pa.—Standard Oil Co., through the People's Gas Co., of Pittsburg, its principal gas company, is now planning to pipe natural gas from the fields of West Virginia into Greater New York, giving the metropolis gas at 50c. per 1,000 ft.; Standard will spend \$15,000,000 in piping gas over mountains and to New York; about 140 miles of distance from Pittsburg, including path

for a pipe line over the Allegheny Mountains, has been staked out, and in most of towns along way arrangements have been made for franchise supplying gas to towns.

Sumter, S. C.—Sumter Telephone Manufacturing Co. will purchase 75-k.w. D. C. generator and 25 to 30-h. p. electric motor.

Hecia, S. D.—Installation of electric light plant is being considered.

Clarksville, Tenn.—Company, represented by E. L. Fisher, Danville, Ill., has purchased Clarksville Electric Light & Power Co.'s plant and will improve same.

Houston, Tex.—Houston Lighting & Power Co. has increased capital stock to \$1,500,000; various improvements are considered, including installation of additional machinery in power house and placing wires in fire district underground.

Salt Lake City, Utah.—Improvement Committee has allowed about 30 more arc lights in First and Second Precincts.

Radford, Va.—Virginia Power Co. has been incorporated with capital stock of \$50,000 by J. J. Mott, city; N. B. McCandless and J. D. Norwood, of Salisbury, N. C.

Pennington Gap, Va.—Monarch Coal Co. will rebuild power house destroyed by fire with loss of \$6,000.

Richmond, Va.—Atlantic Ice & Coal Corporation has included in charter privileges construction of electric and power plants.—Ernest Woodruff, Atlanta, Ga., President.

Tacoma, Wash.—City will call for bids about Jan. 10 for headworks and power tunnel of city's Moqually power plant.—F. C. Kelsey, Project Engineer.

Ronceverte, W. Va.—Ronceverte Milling Co. has been incorporated by Oscar A. Price and others and includes in charter privileges construction of dam across Greenbrier River, building of electric and water power plants.

Sheboygan, Wis.—Sheboygan Light, Power & Railway Co. will issue \$14,000 bonds; power station will be increased to 1,500 h.p.; steam engine purchases and railway system bettered.

Superior, Wis.—Installation of ornamental street lights on Hammond ave. is being considered.

Albert, B. C., Can.—Lewis Cook has decided to build electric lighting system.

Quebec, Que., Can.—The Quebec Railway, Light & Power Co. will soon let contracts for construction of substation at St. Anne de Beaupre.

Waterloo, Ont., Can.—Contracts will soon be let for electric apparatus for proposed power house; contract for building has already been let.—E. S. Kumpf, Secretary, Lighting Commission.

BIDS RECEIVED AND CONTRACTS AWARDED

Sacramento, Cal.—The bid of the Sacramento Electric, Gas & Railway Co. for street lighting for 1910 has been accepted; the price per light to be paid by the city is \$6.30 a month. The total number of lights is 575. This is an increase of 24 lights over the number in use this year.

New Orleans, La.—New Orleans Railway & Light Co., 317 Baronne st., has awarded contract to Jefferson Construction Co., Perin Bldg. city, for erection of substation and emergency house; cost \$22,000.

Schenectady, N. Y.—The Board of Contract and Supply has accepted the contract of the Schenectady Illuminating Co. for the municipal lighting for the next five years. The bids as asked by the Board were for two, three and five years. The proposals of the Schenectady Illuminating Co. were for 17 1/2c. per light per night under the two-year contract and for 16 1/2c. each per night under the three-year contract; the bid for five years was at the rate of \$60 per lamp per year, which is slightly less than the proposal as submitted for the three-year contract. The company was to charge for lighting the public buildings of the city at the regular rate charged commercial houses on the two-year contract and for five years agree to furnish the light at the rate of 5c. per kilowatt hour, which is a considerable reduction.

The proposals for gas lights, if not less than 100 lamps are used, was at the rate of \$30 per lamp per year.

Cincinnati, O.—Park Commission Dec. 27 awarded contract to the Union Gas & Electric Co. to install complete lighting system in Inwood Park, Vine and Hollister sts., at \$4,980; this will include 20 flaming arc lamps on 50-ft. poles.

Portland, Ore.—Portland Railway, Light & Power Co. has awarded to Pacific Eng. Co. the contract for constructing foundation of new power station on river front at E. Lincoln st.

Greens, S. C.—City has awarded contract to A. H. Miller, city, to light streets and public buildings; electricity will be furnished by Southern Power Co., of Charlotte, N. C.

Memphis, Tenn.—Bids were opened Dec.

27 by Board of Education for installing equipment in the high school building now under construction the following, and contracts have been awarded as follows: Ventilating and heating, to Southern Blower & Mfg. Co., Memphis, at \$28,700; automatic temperature regulation, to National Regulator Co., Chicago, Ill., \$4,545; power plant motors and switchboard, to Harster Htg. Co., city, \$11,200, and electric wiring and conduits to the Electric Novelty Co., city, \$6,538.—B. C. Alsop & Co., Architects; J. H. Brady, Kansas City, Mo., Designing Engineers; A. B. Hill, Secretary.

Quebec, Que., Can.—M. P. Davis, of Ottawa, Ont., has secured contract for foundations for Quebec bridge for about \$2,500,000.

FIRE EQUIPMENT

Birmingham, Ala.—Citizens will vote on \$100,000 bonds for erection of four stations and for other improvements. Address Mayor F. P. O'Brien.

Birmingham, Ala.—Town of Graymont is considering purchase of automobile fire engine.

Montgomery, Ala.—City is preparing to purchase auto fire engine.—Gaston Gunter, Mayor.

Los Angeles, Cal.—Board of Fire Commissioners has rejected all bids, same being excessive, for construction of a fire engine house on Figueroa st.

Los Angeles, Cal.—Purchase of 60-gal. chemical engine for Colegrove District is being considered.

Napa, Cal.—Bids will be at once called for furnishing combination chemical and hook and ladder outfit; cost over \$5,000.

Upland, Cal.—East End residents have asked for better fire protection.

Danbury, Conn.—Purchase of chemical engine is being considered.

New Castle, Del.—Good Will Fire Co. will purchase additional apparatus.

Washington, D. C.—District Board of Commissioners will ask for following requirements for year: 25 fire alarm boxes, \$5,000; repairs to houses, \$12,000; purchase of hose, \$15,000; site, erection and establishment of engine house in northwest section, \$15,000; Church rd., \$30,000; one fire engine, \$7,500, and one chemical, \$3,600.—F. J. Wagner, Chief.

Englewood, Ill.—Council has appropriated \$22,000 to erect fire station at 546 69th st.

Moline, Ill.—Village of Silvis has decided to have general fire alarm system.

Garden City, Kan.—Fire Department has been organized.—John Kell, Chief.

Kansas City, Kan.—Plans have been prepared by Architect W. E. Harris for erection of three fire stations.—W. S. Huyer, Mayor.

Hyattsville, Md.—City will soon award contract for erection of brick building to contain municipal offices and fire station.

Cambridge, Mass.—City Electrician T. C. O'Hearn has asked for \$4,500 emergency appropriation for repair of fire alarm and police telegraph system.

Fall River, Mass.—Mayor J. T. Coughlin has recommended appropriation for purchase of truck, engine, another combination automobile and more hose; also installation of complete signal system.

Haverhill, Mass.—Council is favorable to purchase of auto truck.

Holyoke, Mass.—Mayor Avery has recommended purchase of automobile fire engine.

Leominster, Mass.—Fire Chief Morse has ordered all apparatus equipped with emergency kit of medical supplies.

Newburyport, Mass.—Committee on Finance will consider \$6,000 appropriation for purchase of chemical auto truck.

Salem, Mass.—Council will consider appropriation for purchase of auto combination wagon.

Taunton, Mass.—Chief Leonard has recommended establishment of hose wagon at North Dighton.

Cadillac, Mich.—City needs adequate fire protection.

Eaton Rapids, Mich.—Town Council has decided to purchase fire engine.

Kalamazoo, Mich.—Board of Police and Fire Commissioners did not let contract for purchase of fire hose and engine.

Sunfield, Mich.—Citizens have voted to purchase new engine.

Nevis, Minn.—Council is considering purchase of Ajax chemical engine.

St. Paul, Minn.—Erection of engine house in Ninth Ward is being considered.

Jackson, Miss.—Fire Commissioners will demand purchase of aerial truck.

St. Joseph, Mo.—City will purchase engine site on 4th st.

Omaha, Neb.—Fire and Police Board has set aside \$5,000 for proposed fire and police alarm system.

Branchville, N. J.—Fire company will be organized.—J. H. Nelden, Mayor.

East Orange, N. J.—Chief Engineer Wm. E. Markwith has recommended purchase

of automobile combination chemical and hose wagon to be installed on Main st.

Irvington, N. J.—Fire Chief Groom has recommended supplies of varied character for use in department.

Linden, N. J.—Mayor H. B. Hardenburg has recommended better accommodations for Linden Fire Department.

Morristown, N. J.—Mayor Theodore Ayers has recommended extra apparatus for Fire Department.

Perth Amboy, N. J.—Mayor T. J. Scully has recommended erection of fire house.

Plainfield, N. J.—Fire Chief T. O. Doane has recommended installation of auto apparatus.

Rahway, N. J.—Mayor Wm. Howard has recommended purchase of steam fire engine.

Roosevelt, N. J.—Mayor Hermann has recommended erection of fire station for Company No. 2.

Roselle, N. J.—Mayor Chas. MacQuoid has recommended that hose carriages be placed in two stations and purchase of combination chemical and hose wagon to be drawn by horse or motive power.

Rutherford, N. J.—Mayor David Bosman has recommended proper equipment of fire department.

South Orange, N. J.—Township will erect fire house on Maplewood ave. for Maplewood Truck Co.—W. H. Knox, Fire Chief.

Elmira, N. Y.—Mayor Sheehan has recommended early consideration of provisions for fire protection in upper part of city.

New York, N. Y.—Board of Estimate and Apportionment has authorized the Fire Commissioner to construct fire house at Smith and Lorraine sts., Brooklyn, and Lexington ave. and 50th st., at a cost of \$76,000 and \$78,000, respectively.

Port Jervis, N. Y.—Mayor C. N. Knapp has recommended that fire department be supplied with suitable apparatus.

Poughkeepsie, N. Y.—Chief Nagengast has recommended purchase of combination chemical and hose wagon; also 2,000 ft. of hose.

Rochester, N. Y.—Board of Estimate has appropriated \$11,000 for aerial truck and engine.

Stafford, N. Y.—Fire department will be organized and \$700 spent on equipment.

Jackson, N. C.—Bids will be received by G. P. Burgwyn for purchase of chemical engine.

Covington, O.—Police and Fire Commissioners have asked for two new fire houses, 40 fire alarm boxes, automobile chemical engine and auto ladder truck; also more fire cisterns.

Marion, O.—State Inspectors have recommended purchase of new equipment and installation of steamer.—C. M. Tobin, City Clerk.

Struthers, O.—Purchase of auto truck is being considered.

Allentown, Pa.—City is considering purchase of auto combination engine and 5,000 ft. of hose.

Altoona, Pa.—Mayor S. M. Hoyer has recommended purchase of automobile for Fire Chief.

Chester, Pa.—Council is considering \$15,000 appropriation for purchase of truck and chemical tank for Felton Fire Co.

Conneaut Lake, Pa.—Purchase of chemical engine is being considered.

Edinboro, Pa.—Fire destroyed \$85,000 worth of property; no fire department.

Harrisburg, Pa.—Appropriation of between \$40,000 and \$50,000 will be asked of Council for maintenance and extension of fire department this year; at least \$2,000 will be needed for additional company in Eastmore District.

Philadelphia, Pa.—City has purchased site at Belgrade and Huntingdon sts. for erection of fire house.

Williamsport, Pa.—Mayor Chas. D. Wolfe has recommended purchase of hose carriage for Engine Co. No. 1.

Pawtucket, R. I.—Mayor R. A. Kenyon has recommended erection of fire house in South Woodlawn District.

Lebanon, Tenn.—City has inadequate fire protection.

Fort Worth, Tex.—City is calling for bids for furnishing automobile fire apparatus; estimates include two combination chemical and hose wagons.—Address Chief Blaker.

Waco, Tex.—Bids will soon be received for erection of two new fire stations.

Salt Lake City, Utah.—Fire Chief Gore has recommended erection of several houses and establishment of new companies.

Suffolk, Va.—Village of Holland has been destroyed by fire; lack of fire apparatus and water supply.

Barre, Vt.—Town has \$1,200 available for purchase of fire engine.

Tacoma, Wash.—City will advertise for bids for changing horse-drawn hook and ladder truck into one propelled by motor; also for automobile for Chief Geo. McAlevy.

Tacoma, Wash.—Commissioner of Public Works H. J. McGregor has entered into joint contract with Fred A. Ballin of Portland and firm of McCoy & Spear of Tacoma for designing tug to cost not over \$125,000.

BIDS RECEIVED AND CONTRACTS AWARDED

Graymont, Ala.—Council has awarded a contract for the purchase of an automobile fire engine to cost \$4,500; the engine is of the same type as that recently bought by the city of Ensley and will be ordered in a few days from the Seagrave Co.

Oakland, Cal.—The Board of Public Works has awarded the contract for building the new fire engine house at 56th and Grove sts. to O. B. Ackerman & Son, at \$11,755.

The contract to furnish the new one-third size steam fire engine was given to the American La France Co., at \$3,995.

Owing to a misunderstanding of and misinterpretation of the specifications for the combination hose wagon, there was no award made, and the questions raised were referred to the City Attorney; it is possible that there will be a readvertisement for bids on this apparatus.

Quincy, Ill.—City will purchase \$5,000 steamer, of Metropolitan type, from American-La France Co., Elmira, N. Y.

Malcen, Mass.—Fire Commissioner Thos. W. Hough has closed a contract for a Knox auto fire wagon; it will be the best of its kind, with 60 hp.; will carry 1,000 ft. of hose, a 35-gal. tank of chemicals, with hose of 250 ft. in length, two ladders, one an extension and one a roof ladder, axes, etc.; the wagon will also be completely fitted with oil lamps and a powerful searchlight and will carry ten men.

Elizabeth, N. J.—The contract for building new doors and floors in Engine House No. 4 and Truck House No. 2 was awarded the M. Byrnes Building Co.; several bids were submitted; the bid of the Byrnes Co. was \$1,481.

Ventnor, N. J.—Council has decided to purchase Webb motor fire engine, probable cost of which will be about \$8,000.

New York, N. Y.—Bids were received by Fire Department as follows: Dec. 28 for furnishing and delivering manual transmitter for the Fire Alarm Telegraph Bureau of Manhattan Borough; Gamewell Fire Alarm Telegraph Co., 19 Barclay st., \$6,250; Frederick Pearce Co., 20 Rose st., \$6,460.

Fremont, O.—The Service and Safety Boards have closed the contract for an \$8,000 auto fire fighter for the Fremont Fire Department.

Muskogee, Okla.—Through the Pioneer Motor Car Co., of Muskogee, Council has ordered a Chalmers-Detroit "30" for use of the Fire Chief; the car is equipped to carry axes, chemicals, etc., and has four seats; the speed of the car is guaranteed up to 65 miles an hour; the cost was \$1,850.

ELECTRIC RAILWAYS

Bridgeport, Ala.—Bridgeport Electric Railway Co. is considering building of 5½ miles of electric railway. W. D. Scarborough is interested.

Florence, Ala.—Thurston H. Allen, attorney for the proposed Mineral Belt Railroad, has asked for six months' extension of the franchise.

El Centro, Cal.—Holt Interurban Railway Co. will extend line from El Centro to Silsbee. W. F. Holt, Holtville, is interested.

Los Angeles, Cal.—Los Angeles Railway Co. has secured a franchise from Council for new lines on Alpine st. and on Ann st.—G. J. Kuhrt, Chief Engineer.

Oakland, Cal.—Surveys for the proposed extension of Lise ave. line of the Oakland Traction Co. have been commenced.

Waterbury, Conn.—Mayor Wm. B. Hotchiss has recommended extension of trolley facilities.

Washington, D. C.—American consul in European country has reported that a number of projected railway improvements and extensions have been submitted by special committee appointed to deliberate and report upon the matter.—Address No. 4333, Bureau of Manufactures.

American Falls, Ida.—W. R. Berr is interested in building a trolley line from this place to Malsd.

Coeur D'Alene, Ida.—Council has granted petition of J. H. Hall and Herman J. Rossel to use this city's streets for electric line to be constructed through Fourth of July canyon, paralleling O. R. & N. from Catalde to Wallace.

Auburn, Ill.—Council has granted franchise to Illinois Traction Co. to construct its system through that city.

Canton, Ill.—Illinois Central Electric Railway Co. will build line from Norris to Fairview, Ill.—L. W. Morton, President and General Manager.

East St. Louis, Ill.—Southern Traction Co. of Illinois has been granted extension of time in which to build its proposed line; will connect East St. Louis and Belleville. —Harper Bros., city, Engineers.

Marion, Ill.—John Murphy, Eldorado, Ill., is promoting company to build electric railway from Marion to Mt. Vernon, Ind.

Norris, Ill.—Illinois Central Electric Railway Co. will construct eight miles of new track from Norris to Fairview. G. W. Chandler, Canton, is interested.

Port Byron, Ill.—Tri-Cities & Northeastern Interurban Railway Co. has been granted 20-year franchise to build an electric railway on Main st.—J. W. Simonson, President.

Yorkville, Ill.—Yorkville & Morris Electric Railroad Co. will resume construction work this spring; railway will be 22 miles long and will connect Yorkville, Morris and Lisbon; surveys have been made.—H. G. Palmer, Aurora, President and Chief Engineer.

Greenfield, Ind.—Perry J. Freeman, of Richmond, who is promoting Greenfield & Pendleton electric road, will ask Commissioners of this county for franchise across highways of the county.

Indianapolis, Ind.—Petition has been presented to Mayor Shank asking for extension of West Michigan st. car line.

Des Moines, Ia.—The Railroad Promotion and Construction Co., of Des Moines, has been incorporated to construct railroads operated by electricity, gasoline and steam. —Chas. Philpot, Secretary.

Altamont, Kan.—Bonds amounting to \$31,500 have been voted by Pleasant Howard and Elm Grove townships in Labette County to aid in building of the Kansas Union traction line; road will be 40 miles in length, reaching from Parsons to Coffeyville and passing through Altamont, Edna and Valeda.

Belleville, Kan.—Construction of interurban railway from Chester, Neb., to Wichita, is being promoted by Motor Grand Traction Co.

Blue Earth, Minn.—C. O. Anderson, East Chain, is interested in company to construct electric road to Pilot Grove, East Chain, Center Chain, Wilbert, Ceylon and Estherville.

Duluth, Minn.—Duluth Street Railway Co. will expend \$350,000 next year for improvement and extension of its property.

Little Falls, Minn.—Local business men are urging construction of electric railway through Long Prairie to Alexandria.

St. Joseph, Mo.—Council has passed two ordinances granting franchise to St. Joseph Railway, Light, Heat & Power Co.; one grants a 30-year franchise for an extension of Frederick ave. line; other 35-year franchise for line into Northwest St. Joseph.

Millville, N. J.—Millville Board of Trade is interested in proposed trolley line between West Millville and Port Norris via Holleyville.

Clovis, N. M.—Council has granted to E. J. Howard, J. D. Hammett and A. R. Hammett, Moberly, Mo., franchise for a street railway.

Lima, N. Y.—Lima-Honeoye Electric Light & Railroad Co. is planning to build about 50 miles of new track this year.—E. D. Watkins, General Manager.

Utica, N. Y.—Public Service Commission of the Second District of New York State has authorized extension of Utica & Southern Railway from south line of village of Hamilton to and through village of Sherburne and to south line of Norwich, and has granted certificate of public convenience and necessity and has authorized corporation to exercise its franchise.

Raleigh, N. C.—Lumberton & Elizabethtown Railway Co. has been granted charter. —G. B. McLeod, A. H. McLeod, W. P. McAllister and F. A. Bond are interested.

Cincinnati, O.—Cincinnati Traction Co. will add two miles of new track to its line. —Thos. Elliott, Chief Engineer.

Toledo, O.—Toledo Urban & Interurban Railway Co. is planning to construct about 30 miles of new track this year.—Chas. Kilgour, Cincinnati, Chief Engineer.

Youngstown, O.—Peter McCave, Greenford, is interested in proposition to build electric railway from Salem to Youngstown by way of New Albany, Greenford, Calla, Canfield and Landerman's Falls; also branch from near Gettysburg south to Washingtonville, Leetonia, Franklin Square and Shelton's Grove to Lisbon.

Zanesville, O.—County Commissioners have granted 25-year franchise to Zanesville & Melgs Valley Traction Co. for its electric railway through Morgan County; company will build line from Zanesville to Beverly via McConellsville.—H. D. Blodgett, General Manager.

Marshfield, Ore.—Union Traction & Terminal Co. has been incorporated to build electric railway in North Bend and Marshfield, also connecting the two cities.—J. M.

Blake, G. W. Kaufman and R. O. Graves, Incorporators.

Altoona, Pa.—American Railways Co., 904 Witherspoon Bldg., Philadelphia, has completed plans for building electric line connecting Altoona, Gallitzin, Cresson, South Fork, Conemaugh and Johnstown.—H. J. Crowley, General Manager.

Providence, R. I.—Joint resolution has been presented to Board of Aldermen creating commission to investigate and report as to improvements in street railway system throughout city. W. F. Slade, Commissioner of Public Works, is interested.

Chattanooga, Tenn.—Council is considering ordinance granting Chattanooga Railway & Light Co. franchise on two streets in Ninth Ward.

Cockeville, Tenn.—Citizens have voted to subscribe \$30,000 stock toward building of proposed Tennessee, Alabama & Kentucky railroad.

Greenville, Tex.—Mayor Joseph F. Nichols has interested several parties here and at Wolfe City in organization of local corporation to build interurban railways; first line to be considered will be one from Greenville to Wolfe City.

San Antonio, Tex.—R. A. Love, Vice-president of the Concho, San Angelo & Llano Railway, has submitted proposition to Chamber of Commerce to build road from San Antonio to San Angelo.

Wichita Falls, Tex.—George Byers and other citizens from Byers have met Chamber of Commerce in regard to extending road from Byers to Waurika, Okla. Chamber of Commerce and citizens from Byers have offered \$150,000 to anyone who will build this road.

Norfolk, Va.—Local Board of Seventh Ward is urging construction of street railway system in Colonial pl.

Roanoke, Va.—Mill Mountain Incline, Inc., has been chartered to build electric railway from city to summit of Mill Mountain; preliminary capital stock \$5,000 to \$20,000.—A. B. Hammond, President; C. Markley, Vice-President, and O. L. Bottomley, Secretary.

Bellingham, Wash.—Stone & Webster have completed plans for construction of interurban line to Mt. Vernon and Sedro-Woolley.

Seattle, Wash.—Seattle-Everett Interurban Railway Co. will construct four miles of new lines.—Geo. P. James, Chief Engineer.

Seattle, Wash.—Council has passed three bills granting franchises to Northern Pacific for belt line around Lake Union; Mayor J. F. Miller had vetoed them.

Spokane, Wash.—Council has passed ordinance granting Washington Power Co. franchise to build street car line on Liberty, Division and other streets.

Madison, Wis.—Cincinnati Construction Co. has received a certificate of convenience and necessity from Railroad Rate Commission for construction of proposed interurban line from Janesville to Madison; construction work will begin in spring. —H. H. Zigler, President.

Sheboygan, Wis.—Sheboygan Light, Power & Railway Co. will issue \$14,000 bonds for bettering railway system and improving power plant.

Brandon, Man., Can.—E. J. Gifford and H. J. Skynner have applied to Council for franchise to build street railway and power plant.

BRIDGES

Globe, Ariz.—Council will soon call for bids for construction of a bridge over Pinal Creek on North Broad st.

Coram, Cal.—Residents are urging either construction of bridge across Sacramento or reconstruction of road from this city to Redding via Keswick and Copley.

Yuba City, Cal.—Bridge to cost in the neighborhood of \$120,000 is to be asked of Board of Supervisors of this county; this is joint bridge to be built at town of Meridian by Counties of Colusa and Sutter, and Northern Electric Railway Co.

Bridgeport, Conn.—Street and Sidewalks Committee has asked for \$156,541 for bridges and streets.

Arcadia, Fla.—Construction of steel bridge across Shell Creek is being considered.—H. E. Carlton, Clerk County Court.

St. Petersburg, Fla.—Hillsboro County will construct bridge across Long Bayou near Johns Pass; estimated cost \$10,000; bids have been invited.—W. W. Whitehurst, County Commissioner; George Fuchs, County Engineer.

Columbus, Ga.—Bridges and Wharves Committee has introduced ordinance in Council calling for bond election on \$100,000 bonds for construction of proposed concrete or steel bridge across river at Dillingham st.—W. C. Campbell, City Engineer.

Pittsfield, Ill.—Wabash Railroad Co. will construct three new bridges on its Springfield Division over sloughs of the Illinois River.

Davenport, Ia.—Board of Commissioners of Scott County is considering construction of several small steel and reinforced concrete bridges.—Julius Sanders, Chairman.

Fort Scott, Kan.—County Commissioners are considering construction of bridge over the river at Woodland Ford.

Hutchinson, Kan.—City proposes to expend \$20,000 in erection of Main st. bridge; other bridge work will cost \$10,000.

Westmoreland, Kan.—County Commissioners will appropriate \$4,000 if Blue Township will vote \$7,000 of bonds for the construction of an \$11,000 bridge over river in that township.

Lawrence, Mass.—Mayor W. P. White has recommended erection of bridge across Merrimac River.

Lansing, Mich.—Plans and specifications have been prepared for the construction of a foot bridge over Grand River at South st.; cost about \$1,300.

Menominee, Mich.—City is planning on building a bridge; three sites are under consideration.

Duluth, Minn.—Council is considering construction of steel foot bridge on 12th ave.

Springfield, Mo.—City Engineer Horton is preparing plans and making preliminary surveys for construction of proposed viaduct across Jordan Valley on Grant st.

Schuyler, Neb.—Business men are urging construction of new bridge over Platte River in spring.

Asbury Park, N. J.—Mayor T. Frank Appleby has recommended erection of additional wagon bridge across Deal Lake and one across Wesley Lake.

Long Branch, N. J.—Board of County Commissioners has decided to rebuild Goose Neck Bridge.

Rensselaer, N. Y.—Board of Aldermen is considering plans for construction by New York Central Railroad of new highway bridge over Columbia Turnpike.

Dayton, O.—Council has decided to sell \$1,000 bonds for repair of Keowee st. bridge over canal.—C. P. Floyd, Clerk.

Dayton, O.—City will expend \$170,000 in erection of Stewart st. bridge and \$9,000 in erection of Webster st. bridge.

Dayton, O.—Permission to cross Cincinnati pike two miles south of Miamisburg by overhead bridge has been granted Big Four Railroad by County Commissioners.

Altoona, Pa.—Mayor S. M. Hoyer has recommended election on \$25,000 bonds for city's share of new 7th st. bridge; also that Councils investigate advisability of constructing reinforced bridge.

Central Falls, R. I.—Mayor A. Pigeon has recommended issuance of bonds to pay off share of cost of proposed bridge to be erected at Mill st.

Woonsocket, R. I.—Board of Aldermen has concurred in resolution appropriating \$1,300 for bridges.

Chattanooga, Tenn.—Board of Public Works has decided to request railroad companies to repair viaduct at cost of \$16,000.—Robert Hooke, City Engineer.

London, Tenn.—County Court has ordered bridge built across Sweetwater Creek.

San Antonio, Tex.—Bexar County has invited bids for construction of proposed concrete arch bridge; two 110-ft. spans and two 30-ft. spans, carrying 18-ft. roadway; contain 850 cu. yds. reinforced concrete and 1,600 cu. yds. rubble concrete; cost \$22,000. Thos. E. Ramsay, County Auditor.

Seattle, Wash.—Board of Public Works has approved plans for construction of viaduct at 57th st. and Phinney ave.

Cameron, Wis.—Citizens have voted to rebuild bridge over Menomonie River in town of Stanley.

Milwaukee, Wis.—Council will consider resolution providing for issue of \$200,000 bonds for the construction of bridge over Milwaukee River at Buffalo st.

Neillsville, Wis.—County Commissioners have decided to construct steel bridge over Eau Claire River near Tioga.

St. John, N. B., Can.—Council is considering construction of bridge over Harbor at cost of \$750,000.

Sherbrooke, Que., Can.—Aldermen are considering replacing Aylmer bridge across the St. Francois River.

BIDS RECEIVED AND CONTRACTS AWARDED

Los Angeles, Cal.—C. Leonardt, H. W. Hellman Bldg., city, has submitted lowest bid, at \$6,850, for construction of concrete coping and railing for Main st. bridge across the Los Angeles River.

Pueblo, Col.—Following bids for Union ave. bridge were received: Des Moines Bridge and Iron Co., Denver—\$49,000 if the contractor must provide for street car traffic; \$44,700 without street car traffic. If plain concrete is used a reduction of \$800. Bridge to be complete May 20, 1910.

A. M. Blodgett Construction Co., Kansas City, Mo.—\$41,500, not contemplating hand-

ling of traffic. Bridge lamps not to cost over \$50 each. Bridge to be complete nine months after contract is signed.

Alex Campbell, Bid No. 1—\$49,900 for 2-span reinforced concrete. Bridge to be completed in 120 days.

Alex Campbell, Bid No. 2—\$29,600 for 5-span, reinforced concrete. Bridge to be completed 70 days after contract is signed.

M. F. Levy Construction Co., Denver—\$37,000, with addition of \$1,250 for maintaining street car traffic. Lamps to cost \$50 each.

M. J. Patterson Contracting Co.—\$35,900 for steel girder bridge, with concrete abutments. Without maintaining street car traffic, \$1,150 less. Bridge to be completed in 6 months.

Standard Construction Co., City—\$38,650, without maintaining street car traffic. With maintenance of traffic, \$41,150. Bridge to be completed in 6 months.

Midland Bridge Co., Kansas City, Mo.—\$39,500, without maintaining street car traffic. With traffic, \$1,500 more. Bridge to be completed in 200 days.

Wichita Construction Co., Wichita, Kan.—\$35,800, without street car traffic. With traffic, \$1,750 more. Bridge to be completed in 210 days.

C. J. Sheeley Contracting Co., Denver—\$36,721.

Pueblo Bridge Co., Bid No. 1—\$35,000; Bid No. 2, \$29,650; Bid No. 3, \$35,450; Bid No. 4, \$34,950. With maintaining street car traffic for bids Nos. 1 and 2, \$1,200 added; Nos. 3 and 4, \$800 added. Time, 210 days for Nos. 1 and 2, and 180 days for Nos. 3 and 4.

Cairo, Ill.—Missouri Pacific Ry. System, St. Louis, Mo., has let contract to Gould Construction Co., 517 Lane Bldg., Davenport, Ia., for constructing concrete arches requiring 4,200 cu. yds.

Mason, Ill.—Tom Blackburn, Lincoln, has been awarded contract, at \$12,000, for the construction of bridge over Salt Creek.

Burlington, Ia.—Clinton Bridge & Iron Works, Clinton, has been awarded contract for construction of a bridge at Main st.; cost \$10,000.—J. F. Winters, City Engineer.

Lincoln, Neb.—Bids have been received as follows by city for construction of concrete culvert over Antelope Creek from N to P sts.: C. D. Campbell, city, \$39,900; Tanner Bros., Minneapolis, Minn., \$41,949; Katz-Craig Construction Co., Omaha, \$41,161; J. W. Turner Improvement Co., Des Moines, Ia., \$44,822; J. H. Mullen, city, \$43,000; Abel & Roberts, city, \$46,833; John Schrank, city, \$46,200; Gerstenberger & Gooden, city, \$42,500.

Cohoes, N. Y.—The proposals of Contractors Kennedy & Easton, of Albany, for the work of constructing the reinforced concrete bridge at Scott Mills were the lowest of the several submitted to Council and they will be awarded the contract; other bidders were: The Canton Bridge Co., Harris & Halls, of Albany; Union Bridge Co., of New York; W. Acheson, Gratten Construction Co., of Cohoes, and W. King, of Watervliet.

New York, N. Y.—President Murray of the Bronx awarded to L. J. Moran a contract to build a bridge at the Bronx River to connect Becker ave. or 241st st. with Wakefield ave., Yonkers; bridge is to be of reinforced concrete, 50 ft. wide, and cost \$28,280, including approaches, paved roadway, sidewalks and drain pipe.

New York, N. Y.—Bids were opened Dec. 29 by President of Bronx Borough for constructing bridge and approaches over Bronx River at E. 180th st. and lowest bid was that of Leahy Contr. & Constr. Co., 1446 Prospect ave., as follows: 3,300 cu. yds. excav., \$2; 8,000 cu. yds. filling and backfill, 20c.; 5 M ft. lumber, \$30; 100 cu. yds. dry rubble masonry, \$3; 520 cu. yds. broken range ashlar masonry, \$12; 675 cu. yds. class "A" concrete, \$10; 1,200 cu. yds. class "B" concrete, \$6 5,000 sq. ft. waterproofing, 2c.; 50 lin. ft. vitr. stoneware pipe drain, 12-in. diam., \$3; one standard receiving basin, \$150; 780 lin. ft. new bluestone curb, 90c.; 150 lin. ft. old bluestone curb, 30c.; 2,850 sq. ft. cement flag, 20c.; 1,870 sq. ft. new bluestone flag, 25c.; 380 sq. ft. old bluestone flag, 1c.; 2,175 sq. yds. asphalt block pavement, \$1.75; 240 lin. ft. parapet wall, including newels and coping, \$10; 50 lin. ft. gas-pipe railing, \$1; removing and disposing of the existing bridge and abutments, \$500; total, \$37,785. Other bids received were: Briggs & McLaughlin, \$39,562; Haggerty Contr. Co., \$37,994, and J. C. Rodgers, Jr., \$41,993.

Lowest bid opened for constructing bridge across Bronx River, connecting Becker ave., in Bronx, with Wakefield ave., in Yonkers, was submitted by L. J. Moran, as follows: 1,130 cu. yds. excav., \$2; 4,100 cu. yds. filling and backfill, 50c.; 3,000 lin. ft. bearing piles, 40c.; 5 M ft. lumber, \$40; 120 cu. yds. dry rubble masonry, \$2.50; 130 cu. yds. class "A" concrete, \$10; 780 cu. yds. class "B" concrete, \$7; 320 cu. ft. granite coping,

\$2.50; 315 lin. ft. vitr. stoneware pipe drain, 12-in. diam., \$2; 110 lin. ft. vitr. stoneware pipe drain, 10-in. diam., \$1; three manholes, \$50; four inlets, \$60; 265 sq. yds. paved gutters, \$2; 174,000 lb. steel and iron, exclusive of railings, 4½c.; 9,000 lbs. steel reinforcing bars, 3½c.; 820 lin. ft. new bluestone curb, 75c.; 3,110 sq. ft. new bluestone flag, 25c.; 350 sq. ft. new bridgestone, 50c.; 270 sq. yd. asphalt pavt., \$3; 1,190 sq. yds. macadam pavt., \$1.20; 220 lin. ft. ornamental rail, \$5; total, \$28,280. Totals of other bids: Leahy Contr. & Constr. Co., \$28,715; Haggerty Contr. Co., \$28,442, and Briggs & McLaughlin, \$30,139.

Lockland, O.—Contract for constructing a concrete bridge over Mill Creek at Benson st. has been awarded to Peter Praechter for about \$8,000.

Troy, Ore.—Contract for building the 175-ft. span steel bridge across Grande Ronde River at Troy has been let by County Court to Columbia Bridge Co., of Walla Walla, Wash., and Portland, at \$7,984; price includes all furnishing of materials, tools, appliances, labor and the erection of the bridge ready for travel.

Philadelphia, Pa.—Contracts have been awarded by the Reading Railway to Charles F. King & Co. for the grading and masonry in connection with the extension of a fourth track between Perkiomen Junction and Phoenixville, a distance of 1½ miles; the most important part of this work will be the extension of the three-arched bridge over Pickering Creek. A contract was also awarded Enos L. Seeds, of this city, for the erection of an ornamental overhead steel foot bridge over the tracks of the Atlantic City Railroad at Audubon, N. J., on a line with Graissburg ave.

Carpenter's Bluffs, Tex.—The Wisconsin Bridge & Iron Co., Milwaukee, Wis., has secured contract to construct bridge over Red River for the Missouri, Oklahoma & Gulf Bridge and Railway Co., for about \$200,000.

Seattle, Wash.—Board of Public Works Dec. 21 awarded contract for the construction of a drawbridge over Salmon Bay to International Contract Co., 738 New York Block, at \$16,005.

MISCELLANEOUS

Birmingham, Ala.—Citizens will vote on \$100,000 bonds for installation of garbage crematory and for other improvements.—Address Mayor F. P. O'Brien.

Long Beach, Cal.—City Engineer has presented to Council plans for strengthening pier at foot of Pine st.; cost \$83,289; work includes placing of 60,000 cu. yds. of rock and 700 cu. ft. of concrete.

Oakland, Cal.—Park Commission will ask for \$100,000 for improvement of Mosswood Park.

Pasadena, Cal.—All streets where street trees are not now planted will be provided with shade trees during coming spring.—Dr. R. Schiffmann, Chairman of Parks Subcommittee of City Commissioners.

Puente, Cal.—Bids will soon be received by Board of Supervisors of Los Angeles County for erection of a jail.

Willows, Cal.—Purchase of site for erection of City Hall is being considered.—City Trustee Crane is interested.

Bridgeport, Conn.—Board of Park Commissioners has asked for \$3,050 for improvements to parks.

Waterbury, Conn.—Mayor Wm. B. Hotchiss has recommended erection of comfort station.

Chicago, Ill.—Construction of passenger subway will be one of the first results of merger of the local traction lines.—Thomas Mitten, President of Chicago City Railway, is interested.

Council Bluffs, Ia.—Board of Fire and Police Commissioners has decided to buy emergency auto of the Interstate type for police department.

Newport, Ky.—General Council is considering the erection of wing to city building; cost about \$15,000.

Boston, Mass.—Residents of Scituate will present bill to Legislature asking for appropriation of upwards of \$50,000 for repairs on present breakwaters and for new breakwaters and sea walls.

Brockton, Mass.—Mayor Clifford has recommended establishment of playgrounds.

Chicopee, Mass.—City Engineer F. B. Cobb has recommended alterations to city hall.

Fall River, Mass.—Mayor J. T. Coughlin has recommended erection of public bathhouse and public abattoir under municipal control; also system of incineration of scavenger material.

Lawrence, Mass.—Mayor W. P. Logan has recommended erection of modern police station and Court House.

Lowell, Mass.—Mayor J. F. Meehan has recommended extension of public park system, erection of contagious hospital and public hall, also public sanitary near Mer-

rimack Square and public baths accessible all year.

Mariboro, Mass.—Mayor J. J. Shaughnessy has recommended erection of hospital.

New Bedford, Mass.—Mayor C. S. Ashley has recommended continuous street cleaning by organized forces on systematic basis and construction of public playground at north end.

Salem, Mass.—Mayor Howard has recommended erection of police station and railroad station.

Waltham, Mass.—Mayor E. A. Walker is favorable to erection of public library.

Worcester, Mass.—Mayor Jas. Logan has recommended erection of police headquarters, destruction of garbage by incineration, municipal care of persons afflicted with tuberculosis, establishment of additional playgrounds and branch stations of public library.

Cadillac, Mich.—Common Council has ordered plans drawn for a public dock.

Duluth, Minn.—Park Board has purchased three tracts of land in western part of city for park purposes.

Duluth, Minn.—T. F. McGilvray, City Engineer, will suggest in annual report that city purchase about 50 standpipes to be attached to hydrants for filling sprinkler wagons.

Minneapolis, Minn.—Board of Commissioners of Hennepin County has rejected all bids for erection of addition to Detention Home.—Hugh R. Scott, County Auditor.

Omaha, Neb.—Council has decided to purchase \$2,250 automobile for use of Mayor, City Engineer and Councilmen.

Omaha, Neb.—Council in Committee of Whole has agreed on a method for disposing of the garbage and refuse of city for coming year—if bidders with proper equipment will offer to do gathering and removing at reasonable rates; work will be done under license issued by the Health Commissioner, and a bond will be exacted for faithful performance of the work undertaken.

Omaha, Neb.—Council will appropriate \$3,000 for installing electric elevators in city hall.

Omaha, Neb.—Mayor Dahlman will recommend more complete provision for taking care of streets; also purchase of more flushing machines and street sweepers.

Allenhurst, N. J.—City will have concrete sea wall 1,200 ft. long, 20 ft. high and 3 ft. thick, cost of which will be about \$15,000.

Asbury Park, N. J.—Mayor T. Frank Appleby has recommended installation of separate lawn sprinkling system, taking supply from one of lakes; also erection of city hall.

Asbury Park, N. J.—Mayor T. Frank Appleby has recommended that Sewer Committee consult with Beach Commission as to erection of group of bath houses about new septic sewer plant at 8th ave.

Atlantic City, N. J.—Council will consider plan providing for municipally created and municipally owned flower plots at ocean end of each avenue.

Camden, N. J.—Mayor Chas. H. Ellis has recommended improvement of water front.

Chatham, N. J.—Council is considering erection of residence on power house property for Otto Marek, Chief Engineer.

Hoboken, N. J.—Mayor Geo. Gonzales has recommended extension of playgrounds and establishment of free public bath; also free public laundry.

Long Branch, N. J.—Council is considering plan to lease City Park as playground to body of capitalists, who have planned to expend \$1,000,000 in double-deck pier, extending 850 ft. to sea; convention hall, theater and swimming pool, besides 400-room hotel. Principal stockholders of the new company are James C. Ewing and W. S. Mason, of Pittsburg, Pa., and Francis C. Baird, of Spring Lake.

Orange, N. J.—Mayor A. B. Seymour has urged that Council give serious attention to securing adequate municipal building.

Perth Amboy, N. J.—Mayor T. J. Scully has recommended improvements to City Hall.

Perth Amboy, N. J.—Health Officer J. L. Lund has recommended erection of garbage incinerating plant.

Roselle, N. J.—Mayor Chas. MacQuoid has recommended election on \$20,000 bonds for erection of City Hall.

Roselle Park, N. J.—Mayor L. V. Ebert has recommended erection of income paying borough hall.

South Orange, N. J.—Street and Lights Committee will look into matter of securing suitable snow plows for use of township road supervisor.

Trenton, N. J.—Suggestion will probably be made to Board of Freeholders that \$1,000 prize money which County has received from New York "Herald" be used for purchase of automobile for the Supervisor of County Roads, Daniel Klockner.

Trenton, N. J.—Board of Park Commissioners is considering plans for public ser-

vice building as drawn by City Engineer Swan.

Elmira, N. Y.—Mayor Sheehan has recommended rebuilding of City Hall.

Geneva, N. Y.—Mayor O'Malley has recommended that Board of Health be empowered to work out some suitable plan for garbage system; also improvements to Lakeside Park, purchase of patrol wagon and erection of city hall.

Newburgh, N. Y.—Mrs. Edward H. Harriman has offered to State for park purposes 10,000 of 30,000 acres included in famous Harriman estate in Orange county.

Owego, N. Y.—Architects T. I. Lacey & Son, Binghamton, are preparing plans for remodeling Tioga county jail.—Otis Beach, Chairman Building Committee.

Port Jervis, N. Y.—Mayor C. H. Knapp has recommended erection of building to house city property; also collection and disposal of ashes and garbage in sanitary manner.

Rochester, N. Y.—Board of Estimate has appropriated \$15,000 for public comfort stations.

Schenectady, N. Y.—Commissioner of Public Works Emmett, on retiring, recommended that city make adequate provision for care of city's parks.

Cincinnati, O.—Council has decided to issue \$20,000 bonds for purchasing site for erection of police station.—E. Henderson, Clerk.

Cincinnati, O.—Council is considering \$50,000 bond ordinance for purchasing tract at Burnet ave. and Reading rd. for park purposes.

Cincinnati, O.—Council is considering \$15,000 bond ordinance to erect free bath house in Cutter st.

Dayton, O.—City will expend \$633,550 in miscellaneous improvements during year.

Dayton, O.—Board of Health, on retiring, requested \$12,000 appropriation for construction of quarantine hospital.

Dayton, O.—Service Department has asked for \$1,500 appropriation for purchase of two additional flat cars for transportation of garbage.

Kinsfisher, Okla.—Citizens will vote in spring on bonds for cemetery purposes.

Altoona, Pa.—Mayor S. M. Hoyer has recommended purchase of automobile for patrol wagon.

Kennett Square, Pa.—Borough Council has voted to borrow \$60,000 for needed improvements.

McKeesport, Pa.—Board of Health has ordered garbage haulers to provide tightly-covered wagons with beds of iron; six months has been given to comply.—F. W. Hooper, Health Officer.

Williamsport, Pa.—Mayor Chas. D. Wolfe has recommended immediate purchase of about 10 pick-up carts for use of street cleaners.

Central Falls, R. I.—Mayor A. Pigeon has recommended establishment of public playground.

Christiansburg, Va.—Vaughan Construction Co., Vaughan Bldg., desires to correspond with manufacturers of collapsible steel forms for lining tunnels with concrete.

Seattle, Wash.—Council has passed bill appropriating \$1,200 for placing of boards to carry street signs.

Seattle, Wash.—City Engineer Reginald H. Thomson has submitted to Mayor John F. Miller his plan for permanent sea wall about half a mile farther out in the bay; plan, as proposed, provides for sea wall practically entire distance between Connecticut st. and Smith cove and extension of Colorado st. to connection with Puget ave.; Whatcom ave. would be extended to width of 250 ft. to connection with 17th ave. West, thus providing two practically level streets the full length of the water front. From Whatcom ave. slins are to be projected into sound for distances from 550 to 1,280 ft., at the outer edge of which is to be built dwarf sea wall, bringing that territory to a level of 45 ft. above low tide; cost, \$17,500,000.

Seattle, Wash.—M. W. Glover, Past Assistant U. S. Surgeon in Marine Hospital Service, has recommended erection of additional incinerators to take care of garbage in outlying districts; also is favorable to construction of sea wall.

BIDS RECEIVED AND CONTRACTS AWARDED

Bisbee, Ariz.—J. P. Cunningham has been given lease of city's garbage outfit; rate he submitted for service to private residences was 45c. per month; several other bids were submitted; Jerry Kelly bid \$1. E. M. Miller 95c., William Wolf 75c., and W. H. Harris 75c.

Los Angeles, Cal.—Los Angeles County Highway Commission has awarded contract for construction of a highway tunnel and approaches aggregating one mile in length, between San Fernando and Newhall, to E. E. Shaffer, Los Angeles, at \$63,364, which was the lowest bid received; bids on the concrete culvert on Foothill boulevard were rejected and the work will be readvertised, together with other work in that vicinity; tunnel is to be lined with concrete, inside widths being 20 ft. and the height being 17 ft. in the clear; length of the tunnel is 435 ft.—Arthur E. Loder, International Bank Bldg., Chief Engineer.

Ft. Wayne, Ind.—Contract for erecting market house, bids opened Dec. 23, has been awarded to B. Borkenstein, 2532 John st., city, for \$20,000. Other bids received were: S. C. Delegrange, \$20,800; C. Franke, \$21,678; W. F. Stillwell, \$21,255; Paul P. Kinder, \$21,899; G. Hilgeman, \$22,846; Wayne General Constr. Co., \$21,654; Chas. Wermuth, \$21,632; H. Wehrenburg, \$22,673.—H. W. Becker, Clerk Board of Public Works.

Louisville, Ky.—Contract for erecting an office building, bids opened Dec. 23, has been awarded to Bailey & Koerner, Walker Bldg., city, for \$53,306, to be completed July, 1910. Other bids received were: Rommel Bros., \$59,983; Geo. Rommel, \$57,737; Gus Lortz, \$54,325; National Concrete Construction Co., \$54,165; Henry Pickel Co., \$59,184; and Alfred Struck Co., \$55,000.—T. A. Leisen, Chief Engineer, Louisville Water Co.

Portland, Me.—Bids were opened Jan. 3 by City Hall Building Commission for plumbing and electric work for City Hall, from plans of Carrere & Hastings, 225 5th ave., New York, N. Y., and John Calvin Stevens and John Howard Stevens, 187 Middle st., city. Plumbing: Myers & Mahoney, city, \$16,370; M. C. Hutchinson, city, \$17,900; Reed, Stewart & Rhunt, city, \$17,387; A. L. Dow & Co., city, \$14,000, awarded contract; Tucker & Co., Boston, Mass., \$17,829; Wm. B. Johnson, Boston, Mass., \$21,837. Electrical work: York & Boothby, city, \$15,140, deduct \$2,280 if tower not wired, making \$12,860, awarded contract; M. B. Foster Co., Boston, Mass., \$14,414, deduct \$1,200, making \$13,214; Alfred J. Flixon, Boston, Mass., \$15,676, deduct \$1,700; L. W. Cleveland, Inc., city, \$16,400; Edw. C. Lewis, Inc., New York, N. Y., \$16,332, deduct \$2,586.

Marion, Mass.—Contract for new wharf at Steward's Island, 250 ft. long, has been awarded to J. C. Terry, Fall River. The G. W. & F. Smith Iron Works Co., of Boston, will furnish the steel.—F. C. Wales, 8 Beacon St., Boston, Engineer.

Springfield, Mass.—A. E. Stephens Co., Binghamton, N. Y., received, Dec. 30, contract for main construction, Contract 2, of new municipal group, at \$762,118.

Omaha, Neb.—The Board of Fire and Police Commissioners has decided to buy an emergency auto of the Interstate type for the Police Department, making three new automobiles to be delivered within the next two months; the bid of the W. L. Hoffman Automobile Co. to furnish an emergency auto for \$2,453.80 was accepted; it will be a 40-hp. car.

Atlantic City, N. J.—Contract has been awarded to Wilbert Beaumont, city, for widening Boardwalk between Texas ave. and Albany ave., at \$18,627.

Albany, N. Y.—State Superintendent of Public Works Stevens has awarded three additional barge-canal contracts as follows:

Contract No. 33, constructing lock gates, needle beams, guard and sluice gates on various contracts, to Penn Bridge Co., Beaver Falls, Pa., for \$199,639.70.

Contract No. 44, construction of about seven miles of canal west of Mud Creek, Oneida county, Scott Bros., Baldwinsville, \$1,748,679.

Contract No. 70, nearly four miles of dredging in the Hudson River above Waterford, Shanley-Morrissey, Inc., New York, \$779,636.50.

New York, N. Y.—Bids were opened Dec. 30 by Park Board for constructing brick drain in Van Cortlandt Park, and the lowest bid was that of McHarg-Barton Co., 165 Broadway, city, as follows: 25,000 cu. yds. earth excav., 60c.; 500 cu. yds. rock excav., \$3; 2,102,000 bricks, laid in cement mortar, \$17 per M.; 4,690 cu. yds. rubble masonry, laid in cement mortar, \$4.60; 14,000 lin. ft. piling, 20c.; 21 M ft. timber, for caps, \$34; 31.5 M ft. timber for flooring, \$34; 50 M timber for sheathing, left in place, \$40; 500 cu. yds. concrete, \$6; eight brick manholes, each, \$50; 400 cu. yds. riprap broken stone, \$1; total, \$84,183. Totals of other bids: Dominick Bonacci, 672 DeGraw st., Brooklyn, \$94,251; W. T. Brennan, 381 E. 201st st., \$87,382; Priggs & McLaughlin, 337 E. 134th st., \$89,431; C. W. Collins, 5180 Broadway, \$91,003; Thomas Crimmins Contr. Co., 444 E. 69th st., \$102,580; Henry E. Fox, 81 E. 125th st., \$86,410; Hanover Contr. Co., 215 W. 125th st., \$86,272; Marrone & Gasparini, 414 E. 116th st., \$95,354; Jos. Moore, 5 E. 42d st., \$97,421; Rodgers & Hagerty, 121 W. 125th st., \$91,802; Ryan & Reilly, 26 So. 15th st., Philadelphia, Pa., \$88,276, and Louis Wechsler, 1133 Broadway, \$94,690.

New York, N. Y.—Bids were received as follows by Department of Docks and Ferries Dec. 21, on Contract No. 1027, for furnishing all labor and materials required for preparing for and building bulkhead wall, with appurtenances, at Whale Creek, Brooklyn Borough, and for furnishing and depositing riprap thereat: McHarg-Barton Co., 165 Broadway, \$51,134; Grant-Rohrer, 299 Broadway, \$57,800; North-Eastern Construction Co., 225 Fifth ave., \$53,740; N. Y. State Construction Co., 1328 Broadway, \$56,109; Phoenix Construction Co., 41 Park Row, \$54,897; E. De V. Tompkins, 81 East 125th st., \$54,587; W. H. Jenks, 59 Pearl st., \$60,250; Geo. B. Sperlin, \$55,378; R. P. & J. H. Staats, 29 Broadway, \$61,250; N. Y. Submarine Constructing Co., 130 Pearl st., \$56,190; Godwin Construction Co., 30 Church st., \$51,789; Cooper & Evans, 220 Broadway, \$51,700; Bart S. Uronin, \$51,700.

New York, N. Y.—Bids were received by Department of Parks Dec. 30 for work and materials for furniture and equipment of the new Public Library, 5th ave. and 42d st., as follows: Cobb Construction Co., 47 Liberty st., \$543,750; Library Bureau, 316 Broadway, \$662,053; H. H. Davenport, 150 Madison ave., \$679,000; L. Marquet, 142 Flecker st., \$615,375; Thos. D. Wadleton, 160 5th ave., \$544,700; George W. Smith, 334 5th ave., \$558,000; John Gill & Son, 12 West 31st st., \$597,000.

New York, N. Y.—Bids were received as follows Dec. 30 by A. N. Spooner, then Commissioner of Docks and Ferries, for dredging about 200,000 cu. yds. in North River, Manhattan Borough: Henry Du Boise Sons, 17 State st., 13 3/4c. per cu. yd.; W. H. Beard, 21 State st., 16c.; P. Sanford Ross, Jersey City, 15c.; R. G. Packard Co., 130 Pearl st., 14c.

New York, N. Y.—Bids were received Dec. 21 by Department of Public Charities for furnishing all labor and materials required for filling and grading at Coney Island Hospital site on Ocean Parkway; lowest bidder was Frank J. Gallagher, 490 Park pl., Brooklyn, at \$9,740.

Riverhead, L. I., N. Y.—The Suffolk Supervisors have let the contract for the handsome new steel and stone jail to the Van Dorn Iron Works, of Cleveland, O., for \$209,278; the architect, William J. Reardon, of Poughkeepsie, who designed the new Sing Sing prison, gets 5 per cent. It is believed that before the jail construction is all completed it will have cost the county nearly \$250,000, or \$125,000 more than was first designed to spend; 17 jail builders bid on the job, the Van Dorn people being lowest for the entire plant.

Phoenixville, Pa.—Two bids have been read for gathering garbage of Borough for the year; one for C. Y. Wilson, who has had the contract for two years, at present price of \$500, and other from Joseph Kevet, at a price of \$475; latter bid was accepted.

TOO LATE FOR CLASSIFICATION

STREET IMPROVEMENTS

Denver, Col.—Bids will be received Jan. 15, noon, for repair of portion of wagon road and bridge near Rock Creek Canon.—Chas. W. Comstock, State Engineer.

Augusta, Ga.—Mayor W. M. Dunbar, on retiring, recommended permanent paving of all streets leading to river.

Moline, Ill.—Council has ordered laying

of ten blocks of concrete sidewalks in each ward of city during year.

Hammond, La.—Seventh Ward Good Roads Association is urging election on tax for rebuilding roads and bridges.

Flint, Mich.—Bids will be received Jan. 17 for 20,000 yds. paving, 10,000 ft. curbing and 35,000 sq. ft. cement walk, etc., on N. Saginaw st.—D. E. Newcombe, City Clerk.

Gulfport, Miss.—Harrison County Good

Roads Association is urging County Supervisors to appropriate \$10,000 for building sample road, mile or two in length, in several beats.

East Orange, N. J.—City Engineer Frederic A. Reimer has recommended that Main st. be widened for its whole length of between two and three miles by taking three feet from sidewalk on each side, and that it be paved with creosoted wooden blocks; cost between \$100,000 and \$125,000.